NEW EQUIPMENT DIGEST

A Penton Publication

January, 1960

Volume 25 — Number 1

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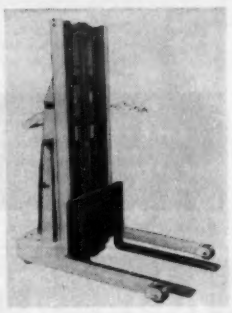
CHECK AND PASS ALONG

✓	NAME	See No.

Use Inquiry Slips—Pages 8 and 72

EQUIPMENT • MATERIALS • PROCESSES • DESIGNS • APPLICATIONS • LITERATURE

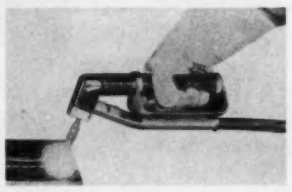
TELESCOPIC TRUCK lifts 1000 lb 160 in.



Powered by synchronized 12-v, heavy duty battery system, this telescopic lift truck will lift a capacity load of 1000 lb to 160-in. height. Low styling suits it for in-and-out travel from room to room. Truck is moderately priced at only $799. • **Big Joe Mfg. Co.**, Industrial Road, Wisconsin Dells, Wis.

▲ For more details circle NED-1 A on enclosed inquiry slip ▲

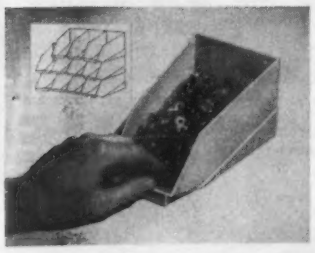
ELECTRODE HOLDER design eliminates hot handle



Operator's hand is protected from heat in two ways by the design of Model Shortstub welding electrode holder. First, cable is brought directly to within a fraction of an inch of the electrode, underneath the handle and not through it. Operator's hand is further protected from arc radiated heat by a lightweight aluminum guard. Holder has 600-amp continuous capacity, is 11 in. long, and weighs only 28 oz. It holds 1/8 through 3/8-in. electrodes and sells for $14.70. • **Bernard Welding Equipment Co.**, 10228 South Ave. N., Chicago 17, Ill.

▲ For more details circle NED-2 A on enclosed inquiry slip ▲

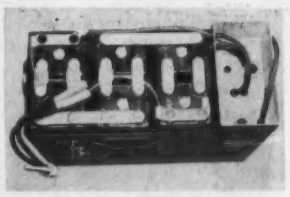
ASSEMBLY BIN plastic unit can be stacked



Good thermal insulation, no magnetic interference, and high abrasion resistance are advantages of the Model A-10P assembly bin, molded of high impact plastic. It can be stacked, and tapered fronts permit a semi-circular set-up. Bin can be interstacked with comparable steel bins. The sloping bottom causes parts to flow forward. Offered with a full width card holder, the bin is 8 in. long, 2½ in. high, 3¼ in. wide at front, and 4½ in. wide at rear. Standard color is light gray. • **Stackbin Corp.**, 1081 Main St., Pawtucket, R. I.

▲ For more details circle NED-3 A on enclosed inquiry slip ▲

BATTERY CASE & CHARGER restores 12-v batteries overnight



Built right in the battery container, Model AR-2 AutoReg silicon charger is available in two sizes for industrial trucks with integral battery compartments. One combination has a 648-amp hr Slyver-Clad 12-v battery, and the other is rated 540 amp-hr. Completely automatic in operation, the charger is merely plugged into any 115-v 15-amp ac outlet. It shuts off when the battery is charged. • **Electric Autolite Co.**, C & D Batteries Div., Washington & Cherry Streets, Conshohocken, Pa.

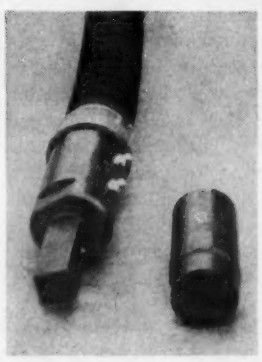
▲ For more details circle NED-4 A on enclosed inquiry slip ▲

LOW-LOAD TESTING MACHINE performs tensile, compression tests

Tensile test specimens up to 3/16 in. thick, 1 in. wide, and 12 in. long and compression test specimens with diameters to 4 in. and up to 6 in. high are accommodated by the Model LPT testing machine. It uses four different load cells with maximum loads of 100, 200, 600, and 1000 lb, and has gages and graduations to match. The 115-v electric motor powered, hydraulically operated mechanism operates at 0 to 1000 lb per second and is independent of the load measurement system. • **Detroit Testing Machine Co.**, 9390 Grinnell Ave., Detroit 13, Mich.

▲ For more details circle NED-5 A on enclosed inquiry slip ▲

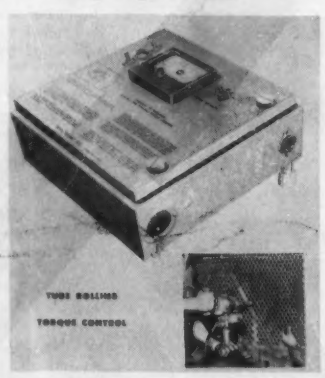
HEAVY-DUTY FLEXIBLE SHAFTS transmit up to 1650 lb-in. torque



Heavy-duty rotary power over any curved path is transmitted by two power drive flexible shafts designed with a square slip coupling at one end. Model S100 with 1-in. diameter core transmits up to 760 lb-in. of torque at 600 rpm, whereas the S125 shaft, with a 1¼-in. core, transmits up to 1650 lb-in. at 500 rpm. Heavy-duty core is made up of layers of tightly wound music wire. Flexible casing is lined with tempered spring steel, reinforced with wire braid, and covered with neoprene-impregnated fabric and a rubber jacket. Any length can be ordered. Couplings of various bores are available. • **Stow Mfg. Co.**, 26 Shear St., Binghamton, N. Y.

▲ For more details circle NED-6 A on enclosed inquiry slip ▲

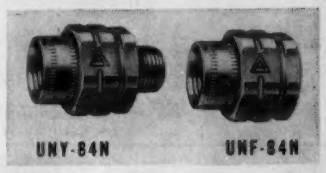
TORQUE CONTROL measures tube rolling tightness



When used to drive tube expanders, this tube rolling torque control automatically regulates the amount of expansion or degree of tightness of the tube joint. Thus, tubes can be uniformly rolled in boilers, condensers, heat exchangers, and similar tubular heat transfer units. Standard reversible universal electric drills or tappers can be used to drive the tube expander. Dual ammeter range of 0-10 and 0-20 amp, for small and large motors, respectively, allows instrument's use on ¼ to 4-in. OD tubes. Unit is housed in strong enclosure with carrying handle and back support. • **Gustav Wiedeke Co.**, 1833 Richard St., Dayton 1, Ohio.

▲ For more details circle NED-7 A on enclosed inquiry slip ▲

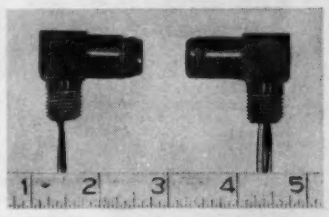
EXPLOSIONPROOF UNION for conduit in hazardous areas



Small male and female explosionproof union allows installation of rigid conduit in hazardous areas. Made only in a ½-in. size, union is UL-listed for Class 1, Groups A, B, C, and D, and Class 2, E, F, and G installations. • **Appleton Electric Co.**, 1701 Wellington Ave., Chicago 13, Ill.

▲ For more details circle NED-8 A on enclosed inquiry slip ▲

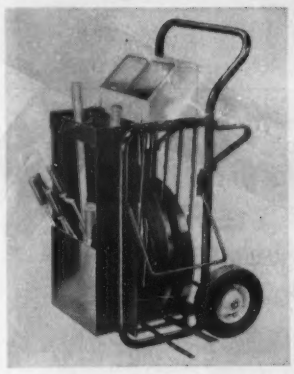
PHOTOELECTRIC PICKUPS miniature count and control units



Mounted directly on ¼-in. pipe or any stationary support, these miniature photoelectric pickups measure 1 13/16 x 1 5/16 in. Diameter is 11/16 in. They detect interruption of a light beam by a passing box, edge of a sheet, or other object in counting or controlling applications. Reflecting type units are used to monitor, register, differentiate between surface qualities, or to establish motion limits of paper or plastic sag. • **Photomation, Inc.**, 96 S. Washington Ave., Bergenfield, N. J.

▲ For more details circle NED-9 A on enclosed inquiry slip ▲

STEEL STRAPPING TRUCK holds coils, tools, accessories



Self-contained Model E46AO portable strapping station can be wheeled directly to the work. Built of welded tubular steel, the steel strapping truck and coil holder has a double-binned seal box and carries seals, corner protectors, anchors, and strapping tools. Ten-inch rubber tired wheels and flared handles facilitate handling. Guide rods on the coil holder are easily repositioned for various combinations of ¾, 1¼, or 2-in. wide heavy duty steel strapping. • **Acme Steel Co.**, 135th & Perry Avenue, Chicago 27, Ill.

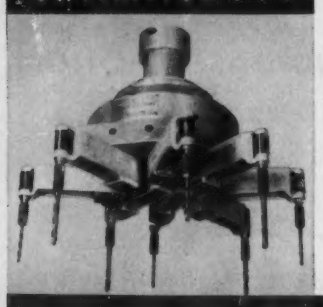
▲ For more details circle NED-10 A on enclosed inquiry slip ▲

PENETRATING OIL packed in self-spraying cans

Pinpoint delivery of Sprayon No. 203 penetrating oil is made possible by the self-spraying aerosol can in which it is packaged. In addition to freeing corroded parts, the quick-penetrating oil can also be used to lubricate tight-fitting parts. It will not harm painted surfaces. • **Sprayon Products, Inc.**, Industrial Supply Div., 2075 E. 65th St., Cleveland 3, Ohio.

▲ For more details circle NED-11 A on enclosed inquiry slip ▲

adjustability unlimited . . . . . with ZAGAR HEADS for drilling, reaming, tapping



THE MOST COMPACT UNCOMPLICATED ADJUSTABLE HEAD AVAILABLE

Zagar's adjustable spindle head is ready to use on any standard drill press. No auxiliary, extra parts needed. Bolt circles up to 23" dia. permit limitless inner hole patterns—changeable at little cost, easily. New heavy duty arms for tough applications. For more information,

NO GEAR CLUSTERS
NO UNIVERSAL JOINTS
NO FLEXIBLE SHAFTS

Write for Bulletin 659-1-N

Zagar INCORPORATED
23880 LAKELAND BLVD.
CLEVELAND 23, OHIO
TOOLS FOR INDUSTRY and SPECIAL MACHINERY

▲ For more details circle NED-12 A on enclosed inquiry slip ▲

how you benefit with Lamb® GEARMOTORS

Two-stage helical gearmotor with crank on output shaft to operate circuit breaker. Frame 2 7/16 x 1 1/2

Induction gearmotor with quiet operating three-stage gear train and magnetic brake for rotary office file. Frame 4 1/2 x 2 3/8

Lamb fractional horsepower gearmotors, designed to functionally match your product, provide the important requirements of:

- *low speed*
- *compactness*
- *low weight*
- *high torque*
- *dependability*
- *favorable cost*
- *improved product appearance*

Many years of specialized experience in this field, combined with the finest gear cutting and testing equipment, assure unexcelled performance in Lamb gearmotors.

Write for descriptive folder.

THE Lamb Electric COMPANY KENT, OHIO

A Division of AMERICAN MACHINE and METALS, Inc.
In Canada: Lamb Electric Division of Sangamo Company Ltd., Leaside, Ontario

▲ For more details circle NED-13 A on enclosed inquiry slip ▲

NEW! More Resilient!
LUBRICATED TEFLON* IMPREGNATED ASBESTOS PACKING

Made with braided GLASS FIBER CORE

The Perfect Seal Against Acids, Alkali, Solvents!
Hot, cold, concentrated, diluted. Temperatures from —150°F to +500°F

Specify Style No. 401 for everything but molten alkali metals, fluorine, hot phosphoric acid and hydrofluoric acid. (Specify Style No. 402 Lubricated *Teflon* Blue Asbestos Packing without glass fiber core for hot phosphoric acid and hydrofluoric acid.) Use the coupon to order 10 ft. of any size (made 1/16 inch to 1 inch in gradations of 1/16 of an inch) and if it doesn't work to your satisfaction we'll cancel the invoice. You'll be surprised at its first cost — it's considerably lower than any other *Teflon* Impregnated Packing on the market.

*DuPont trade-mark for tetrafluoroethylene resin

Mechanical Packing Division
FLEXROCK COMPANY, 3603 Filbert St., Phila. 1, Pa.

☐ Please send further information.
☐ Ship 10 ft. length ☐ #401 or ☐ #402 size _____ on memo invoice.

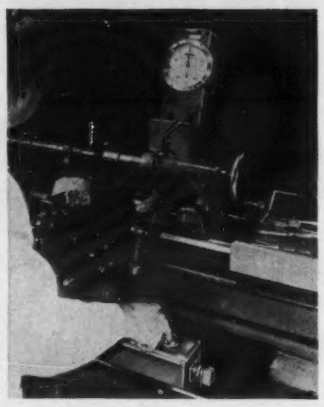
Name _____
Company _____
Address _____
City _____ Zone _____ State _____

Please clip coupon to Company letterhead

A FLEXROCK PRODUCT

▲ For more details circle NED-14 A on enclosed inquiry slip ▲

MACHINING METER is guide to lathe tool position



Direct measurements of longitudinal cutting distance on lathes are made with the Model 555 B-245 Distometer. It provides the machine operator with a constant guide over the full travel of the lathe carriage, and can be referenced instantly at any point in the travel with pushbutton zeroing. Movement can also be measured continuously to any other point. Dial graduations are 0.002 in. and range per revolution of the pointer is 0.500 in. Revolution counter is divided into 10 segments. Distometer is mounted on the lathe carriage and is effective in cutting shoulders, grooves, and bores. • **Federal Products Corp.,** 1144 Eddy St., Providence 1, R. I.

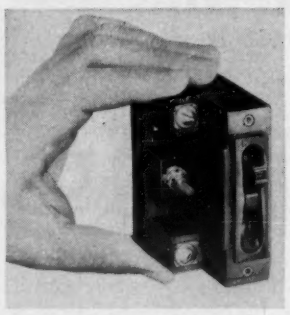
▲ For more details circle NED-15 A on enclosed inquiry slip ▲

CUTTER GRINDING FIXTURE for up to 6-in. milling cutters

Plain milling cutters up to 6 in. in diameter are easily sharpened on a horizontal surface grinder using this grinding fixture. Cast of Meehanite, the 5-lb fixture holds cutters with bores of 7/8, 1, and 1 1/4 in. Over - all height is 6 in. • **Montgomery & Co.,** 401 Morris Ave., Springfield, N. J.

▲ For more details circle NED-16 A on enclosed inquiry slip ▲

MANUAL POWER SWITCH can be tripped electrically



Practically any type of power from a remotely-located control or safety device can be made to electrically trip this manual power switch. With its breaker contacts electrically isolated from the coil, a limit control, timer, malfunction detector, or overload condition in one circuit can cause tripping in another interlocked control circuit. Interrupting capacity is 2000 amp at 125 v ac. Unit is offered with a current or voltage sensing coil. • **Heinemann Electric Co.,** 490 Plum St., Trenton 2, N. J.

▲ For more details circle NED-17 A on enclosed inquiry slip ▲

UNUSUAL BARGAINS

INDUSTRIAL ERECT IMAGE LOW POWER MICROSCOPE
5X, 10X, 20X—$80.00 Value—Only $19.95

Extremely sturdy with rack and pinion focusing, color corrected optics, turntable microscope body for inclined viewing, three different powers, long working distance under objectives, sufficient eye relief for easy viewing. Made from war surplus optical instrument so that you actually get $80.00 of value. Weighs 4 lbs., 13" high. 10-DAY FREE TRIAL! Accessory objectives available for powers of 15X, 30X, 40X.

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Pocket Size—Fast—Easy to Use!

Be a Math Whiz! New Circular Slide Rule multiplies, divides, figures fractions, percentages, squares, cubes, roots, proportions, circumferences, areas, retail prices, fuel consumption. Eliminates the confusions of ordinary slide-rules. Priced far lower. Faster, easier to learn and use. Constructed of 2 aluminum discs with plastic indicator. 3 1/2" diameter. Directions included.
Stock No. 30,336-AE ..... $4.95 Postpaid
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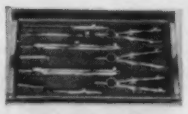

CLOSE OUT! MECHANICAL DRAWING SET

Regular Price $18.00, Our Price Only $8.00 Ppd. American manufacturer couldn't compete with foreign imports—thus you get a terrific bargain, even far below import prices. 10 handsome pieces in velvet-lined case. Nickel plated brass — precision American-made. We guarantee you'll be satisfied or money refunded.
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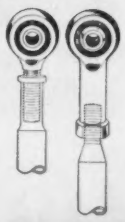
OVER 1,000 OPTICAL ITEMS . . . Many on-the-job helps . . . quality control aids! 128 pages — hundreds of illustrations. Many war surplus bargains! Imported instruments! Lenses, Prisms, Magnifiers, Telescopes, Satellite Scopes, Microscopes, Binoculars, etc. Optics for industry, research labs, experimenters, hobbyists, math learning aids. Write for FREE Catalog AE

EDMUND SCIENTIFIC CO., Barrington, N. J.

▲ For more details circle NED-18 A on enclosed inquiry slip ▲

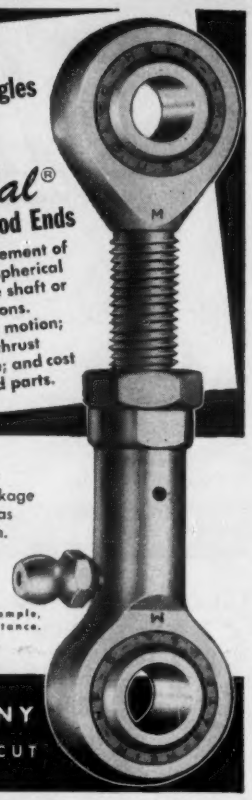
Wherever motion is to be transmitted at varying angles
HEIM Unibal®
Spherical Bearings and Rod Ends

Because of the universal movement of the single ball in the Unibal spherical bearing, misalignment of the shaft or stud is corrected in all directions. They reduce friction and lost motion; carry maximum radial and thrust loads; save assembling time; and cost less than specially machined parts.



Unibal Rod Ends for practically every linkage application, priced as low as 30 cents each.

Send for catalog, sample, or engineering assistance.



THE HEIM COMPANY
800 SANFORD STREET
FAIRFIELD, CONNECTICUT

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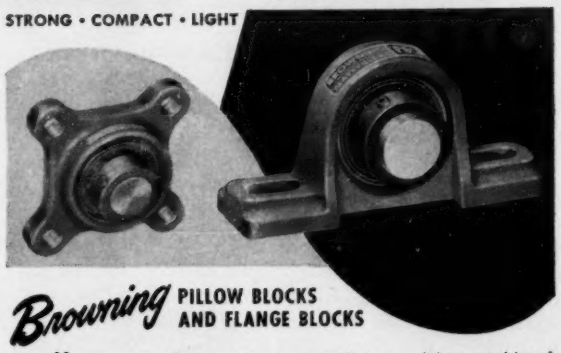
NOW . . . BEARING UNITS OF Malleable
STRONG • COMPACT • LIGHT



Browning PILLOW BLOCKS AND FLANGE BLOCKS

More compact design and consequent lighter weight are achieved in Browning's new pillow blocks and flange blocks by the use of *malleable* housings that are stronger, virtually indestructible. Contain self-aligning ball bearing units, permanently lubricated and sealed; wide inner ring, eccentric locking ring, safety set screw. Your Browning distributor stocks *two heights*, 28 sizes for 1/2 to 2 7/16" shaft, all with elongated bolt slots. Ask for new descriptive Catalog BU-101.

Browning Manufacturing Company, Maysville, Kentucky.

Browning POWER TRANSMISSION EQUIPMENT

▲ For more details circle NED-20 A on enclosed inquiry slip ▲

TORQUE
applied by the inch ounce

ACTUAL SIZE

Available in these Torque Ranges

MODEL	CAPACITY
F80-I-G	0- 80 inch grams
F8-I-O	0- 8 inch ounces
F16-I-O	0- 16 inch ounces
F32-I-O	0- 32 inch ounces
F80-I-O	0- 80 inch ounces
F160-I-O	0-160 inch ounces

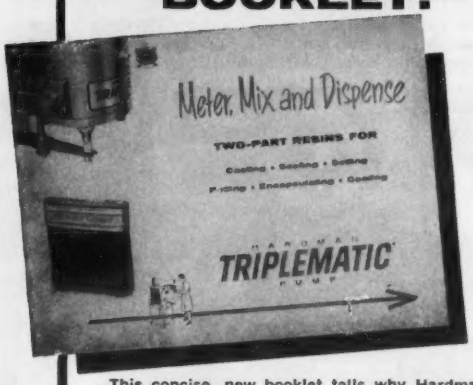
Inch pound models and larger foot pound ranges also available

sent on request

P.A. STURTEVANT CO.
ADDISON QUALITY ILLINOIS

▲ For more details circle NED-21 A on enclosed inquiry slip ▲

IF YOU MIX 2-PART RESINS
GET THIS FREE BOOKLET!



This concise, new booklet tells why Hardman TRIPLEMATIC® Pumps are 3-ways better for metering, mixing, and dispensing 2-part resins:

1 **SIMPLIFIED,** Maintenance-Free Operation
2 **ADAPTABLE** to All Applications
3 **PRODUCTIVE,** Cost-Saving Economies

Write today for your free copy and discover all the features that make TRIPLEMATIC the outstanding performer wherever 2-part resins are used.

H. V. HARDMAN CO., INC.
587 Cortlandt Street, Belleville 9, N. J.

▲ For more details circle **NED-22 A** on enclosed inquiry slip ▲

NEW DECOR-STIK
The Glamorous, Economical Method of
PRODUCT DECORATION, TRIM OR IDENTIFICATION
METALIZED MYLAR AND VINYL COMPOSITION WITH PRESSURE-SENSITIVE ADHESIVE BACKING

UNLIMITED USES:
- DECORATIVE TRIM • PANELS OR GRILLES
- IDENTIFICATION NAMEPLATES
- COLOR SPOTS OR FOCAL POINTS

Rugged! Economical! Practical!

DECOR-STIKS are obviously cheaper than metal—and application of metal to product. Have extra durability and long life—will not tarnish, fade or stain—cannot peel or crack.

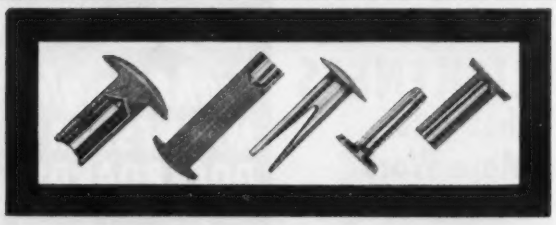
PLAIN, PRINTED OR EMBOSSED...

All patterns are available in four standard colors: copper; chrome; gold or brass.

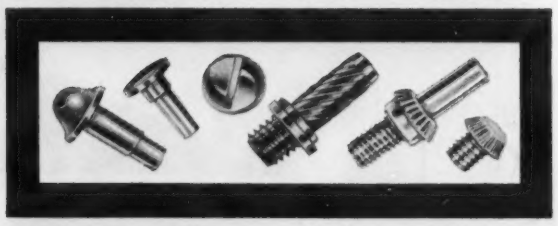
Write today for complete data and samples of colors and patterns. Also get FREE copy of 48-page full color "IDEAS IN ACTION", crammed with illustrations and case histories—newest data on unusual application for labels and seals.

allen hollander company, inc.
385 Gerard Avenue, New York 51, N. Y.

▲ For more details circle **NED-23 A** on enclosed inquiry slip ▲



COST PREVENTION...NOT COST REDUCTION...IS THE EFFICIENT WAY TO LOW-COST ASSEMBLY



The 'in-place' cost of a fastener is what really counts to cost-conscious production men. By deciding on inexpensive Milford tubular rivets as a fastening method and installing them with Milford automatic rivet-setting machines, design and production engineers are eliminating costs at the initial production stage rather than later at the assembly line. Write for more information.

THE MILFORD RIVET & MACHINE CO.
MILFORD, CONN. • HATBORO, PENN. • ELYRIA, OHIO • AURORA, ILL. • NORWALK, CALIF.

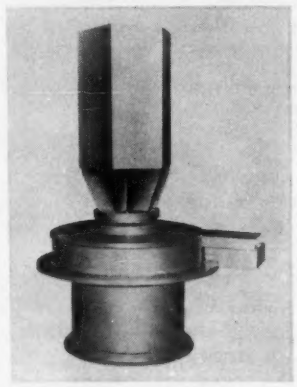
▲ For more details circle **NED-24 A** on enclosed inquiry slip ▲

THICKNESS GAGE
measures coatings of any type

In addition to measuring the thickness of metallic and nonmetallic coatings on any dissimilar bases, the Elcotector thickness gage also compares the hardness and grades of metals and other materials. The electronic micro-gage and comparator operates on the eddy current principle which measures the conductivity of the materials being checked. Housed in a 12 x 8 x 8-in. aluminum cabinet, the English-made instrument operates on 100/115, 220/230, or 240/250 v, 50/60 cycles ac. • **Ferro Corp.,** Supply Div., 4150 E. 56th St., Cleveland 5, Ohio.

▲ For more details circle **NED-25 A** on enclosed inquiry slip ▲

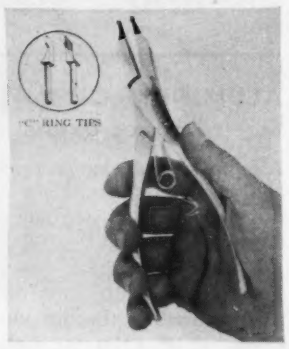
ROTARY INDEXING TABLE
adjusts to any indexing pattern



Any index pattern, with any number of indexes from 4 to 24, can be set on the Versi-Table, a mechanical rotary indexing table available for either air or hydraulic operation. Locked position of each station can be changed from 0 to 15 degrees from its true location. Table can be made to skip 1, 2, 3, or 5 stations each index. It is made in 12, 24, and 42-in. diameter, 24-station models. Largest size is offered with or without stationary column shown for mounting drill, tap or staking units. • **Lithibar Co.,** Savage Engineering Div., 345 W. 14th St., Holland, Mich.

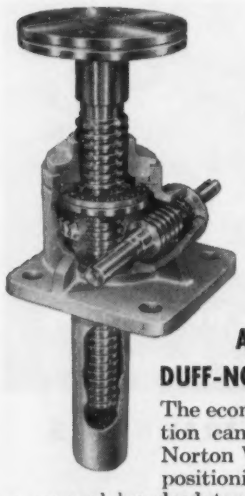
▲ For more details circle **NED-26 A** on enclosed inquiry slip ▲

SNAP RING TOOL TIPS
handle C or holeless snap rings



Special serrated tips which handle C or holeless snap rings are now available for the Milbar replaceable tip snap ring tool. Tips have the same replaceable advantages of regular straight or angled tips and can be discarded when worn out. Thus the tool can be used indefinitely. • **Milbar Corp.,** 1900 Euclid Ave., Cleveland 15, Ohio.

▲ For more details circle **NED-27 A** on enclosed inquiry slip ▲



New Economy for Machinery Designers

A STANDARD LINE OF DUFF-NORTON WORM GEAR JACKS

The economies of standardized production can be realized by use of Duff-Norton Worm Gear Jacks for accurate positioning of loads weighing as much as several hundred tons. This standard line of eight jacks ranges from 2 to 100 tons in capacity. When jacks are used in an arrangement, added economy can be realized in raising unevenly distributed loads, since all models now have a uniform raise which permits jacks of varying capacities to operate in unison. Worm gear jacks are furnished with standard raises from 6 to 24 inches. Special raises can also be furnished. Write for Bulletin AD-66-N.

DUFF-NORTON COMPANY
P. O. BOX 1889, PITTSBURGH 30, PA.

▲ For more details circle **NED-28 A** on enclosed inquiry slip ▲

FOR INDUSTRY OR HOME-CRAFT 8" TILT ARBOR SAW
•
BUY DIRECT FROM FACTORY

NOW $14.85 WAS $29.95

COMPLETE AS SHOWN—LESS BLADE

5/8" NEW DEPARTURE
BALL BEARING SPINDLE
PRECISION GROUND CAST IRON TABLE

Ideal for light factory work — excellent for the home workshop — that's the new Model 590B 8" TILT ARBOR SAW. Over 300,000 sold already! Does everything same as saws costing 4 times as much — cross cuts, rips, bevels, mitres, dadoes, cuts compound angles. Adjustable depth of cut: 0" to 2¼". Blade tilts to 45°. Heavy duty all cast iron and steel construction. Precision ground cast iron table. Sealed NEW DEPARTURE ball bearings never need lubrication. Price includes massive cast iron mitre gauge and patented motor drive that fits any motor. All parts and labor guaranteed 10 years.

SPECIAL BARGAIN . . . This saw is our 1959 Model — *brand new* — shipped in factory sealed cartons. Sold and guaranteed from factory to you at fantastically low price.

MONEY BACK GUARANTEE . . . This saw and parts are guaranteed 10 years! Try it for 10 days. If not completely delighted — FOR ANY REASON — return for immediate refund. Order Model 590B. ***SENT EXPRESS COLLECT—Send check or M.O. $3.00 deposits on C.O.D.'s • Open account to rated firms***

AMERICAN MACHINE & TOOL CO.
ROYERSFORD, PA.
Our 30th Year Manufacturing Quality Power Tools
Pennsylvania residents add 4% sales tax

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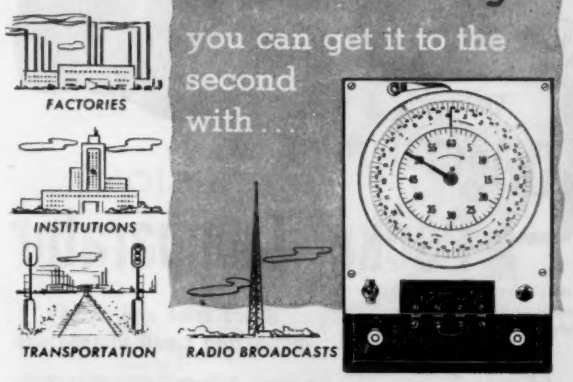
Need Efficient Timing?



ZENITH program timers

Signal bells, buzzers, lights, etc. are dependably controlled with ZENITH units—proved in countless applications. Synchronous motor for accuracy...5-minute intervals in any 24-hour schedule ...easily changed...calendar cutout optional. *Write for bulletin.* See Classified Phone Directory for Name of Local Distributor.

TIMERS FOR ALL APPLICATIONS

ZENITH ELECTRIC CO.
169 W. WALTON ST. • CHICAGO 10, ILL.

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Permanently Marks Anything Iron or Steel

IDEAL

"UNIVERSAL"
ELECTRIC ETCHERS

As easy to use as a pencil . . . Burns a smooth, permanent mark into metal. Dozens of marking uses in every plant. Cheaper, more reliable than tags or special plates. Pays for itself! Safe . . . portable . . . ready to use! The "Universal" has 4 etching heats from 120 to 700 watts. Other models for all types of work.

SEE YOUR DISTRIBUTOR OR MAIL COUPON

IDEAL INDUSTRIES, Inc., 1032-A Park Avenue, Sycamore, Illinois
Please send catalog data and price information on IDEAL Etchers.
NAME_____
COMPANY_____
ADDRESS_____
CITY_____ ZONE____ STATE_____
CANADIAN DISTRIBUTOR: Irving Smith, Ltd., Montreal

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CHROMALOX SNAP-ON DRUM HEATERS

Just snap on and plug in . . . for fast, uniform heating. 5-gallon size temperature ratings from 140° to 230°F . . . 300 to 1,000 watts. 55-gallon size temperature ratings from 140° to 190°F . . . 750 to 1,500 watts.

Resistance wires are double covered with braided Fiberglass and woven into a flexible mesh. Available with silicone rubber coating or impregnated with Teflon for added protection against abrasion and chemical attack.

Write for prices. Tell us which size and what is to be heated. Edwin L. Wiegand Company, 7500 Thomas Boulevard, Pittsburgh 8, Pennsylvania. 91648

CHROMALOX *Electric Heat*
INDUSTRIAL • COMMERCIAL • RESIDENTIAL

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THE **Original** PRECISION **Pocket Comparator**

checks small radii and diameters — checks linear dimensions — checks angles — checks radii

Saves time and money inspecting small dimensions

• Here's *guaranteed* accuracy in checking small dimensions at a price any business can easily afford. Save time and money measuring wear on cutting tools, checking forms and dimensions of punches, dies and gauges—as well as chamfers, threads and small holes on production parts.

Thousands in use by America's leading precision manufacturers. It's the greatest time-saver since the micrometer!

price only **$36.00** order today

Write for FREE descriptive folder

NATIONAL TOOL CO.
A division of National Cleveland Corporation
11300 Madison Avenue • Cleveland 2, Ohio

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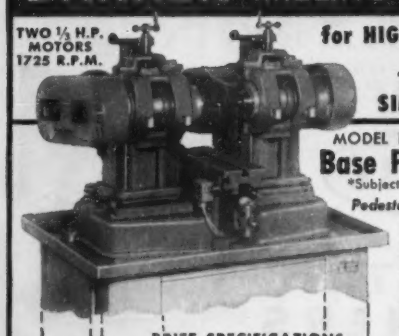
BARKER DUAL-HEAD MILLING MACHINE

TWO 1½ H.P. MOTORS 1725 R.P.M.

for HIGH PRODUCTION MACHINING OF TWO SURFACES SIMULTANEOUSLY



MODEL PMD
Base Price $833.75*
*Subject to change without notice.
Pedestal & Power Feed Extra

Stepped pulleys permit a variation of speeds on the two spindles to accommodate the proper cutter for the milling operation desired.

Designed to utilize advantages of carbide tools.

BRIEF SPECIFICATIONS

- SPINDLE SPEEDS — Standard 1000-1725-3000. Nine lower speeds by using (optional) Low Speed Drive. Special Motors for still higher or lower speeds.
- DISTANCE BETWEEN SPINDLE FACES—2½" Min.—5¾" Max.
- TOP OF TABLE TO CENTER LINE OF SPINDLE—1⅜" Min.—4⅝" Max.
- HEAD—Heavy, rigid construction 3¼" travel.
- TABLE—4" x 12" working surface—½" T slot—5" longitudinal travel.
  Can be Hand, Screw Feed or Air-Hydraulic Operated.
- SPINDLE—Nickel Steel. Takes standard collets from 1/16" to ½".
  Collet draw tube takes ½" dia. stock.
- ADJUSTABLE STOPS.

WRITE FOR COMPLETE DATA ON THIS MILL AND OUR LARGER MODEL A.M.D. DUAL MILL.

BARKER ENGINEERING CO.
DIVISION
THE F. HOHLFELDER CO.
26470 Lakeland Blvd. • Cleveland 32, Ohio

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NEW EQUIPMENT DIGEST

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removes oxide, scale, discoloration

Aluminum can be cleaned of oxide, scale, and discoloration prior to or after welding, soldering, or heat treating by a one-step method using Ox-Off 536. Procedure involves a hand-wiping or dip-tank operation followed by a water rinse, all at room temperature. Polyethylene Cubitainer in which product is shipped can be used as the dip tank. • **Chemclean Products Corp.**, 15-08 121st St., College Point 56, N. Y.

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STOP Back breaking lifting
GO *In any direction with*

LOGAN BALL TRANSFERS

Continuous lifting is not only tiring, but it's inefficient—often unsafe—unnecessary, too, when a Logan Ball Transfer Unit will do the job.

They're available as either complete tables from stock, separate ball assemblies or completely made-to-order units.

Write if you would like more information. Be sure to give us necessary details about usage, products to be handled, etc.

LOGAN CO., 215 CABEL ST., LOUISVILLE 6, KY.

Logan Conveyors

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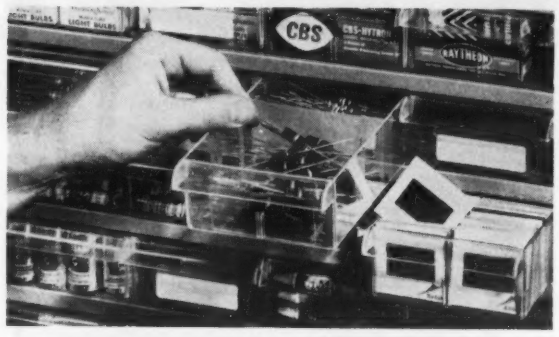
CUT COSTS with PLANNED SMALL PARTS STORAGE!

Conserve valuable space, reduce costly "looking" time with Akro-Mils Small Parts Storage Cabinets. 102 Stock models available, others can be built to your specifications.



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If you have a cable marking or strapping problem . . . send today for samples and catalogues to . . .

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Muscle-Saving LIGHTNESS that gets More Work Done Faster, Easier, Safer...

mpm *Lightweight* **MAGNESIUM DOCKBOARDS**

867 models and sizes to match YOUR needs

mpm Dockboards in hundreds of standard dimensions, plus unlimited varieties adaptable for quick job-engineered special uses, makes **mpm** your first choice for job-fitting efficiency. Write, or phone for an mpm Dockboard expert, and estimates that bring your handling costs down to rock bottom.

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MAGNESIUM PRODUCTS OF MILWAUKEE, INC.
740 N. Plankinton Ave.
Milwaukee 3, Wisconsin

Write for Bulletin TR-656 covering technical details on mpm Standard and Job-Engineered Dockboards.

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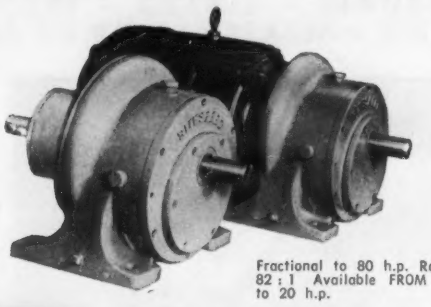

Fractional to 80 h.p. Ratios up to 82 : 1 Available FROM STOCK up to 20 h.p.

Crofts **'RITESPEED'**
GEARMOTORS & GEAR REDUCERS

★ *LOWER INITIAL COST* ★ *LESS MAINTENANCE*

"Ritespeed" gearmotors and gear units provide the EXACT RATIO to meet your requirements.
Compact in design, they can be mounted in any position, and there is a Flange-Mounted series, including Vertical Geared Motors for use with stirrers, mixers and similar machines.
Both gearmotors and gear units cover the same power range, the former taking any make or type of flange-mounting electric motor.
In addition, the incorporation of a HIRATIO adapter enables ratios up to 2175 : 1 to be obtained, while the inclusion of a "Multispeed" gear unit provides two, three or four speed changes, selected by hand lever.
For swift replacements or change of ratios the Cartridge Assembly can be supplied.

Write for Bulletins G5828 and G5829

CROFTS U.S.A. INC.
2542 West Peterson Avenue, Chicago 45, Illinois
Telephone: ROgers Park 1-0019
ALSO AT MONTREAL AND TORONTO
Eastern States Distributors
Rockwood Pulley Mfg. Co., 20 Crosby St., New York 13

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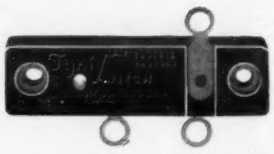
CLASS 1



SHOWN ACTUAL SIZE
LENGTH 1-5/8"—WIDTH 7/16"—DEPTH 11/32"

Full 15 AMPERE RATED SWITCH

The class 1 TyniSwitch is unusually small for a full 15 ampere rated precision switch. It provides positive action in a small space, with long life, and is virtually bounceless. It stands up under shock and vibration too. Class 1 TyniSwitches are top mounted and top actuated and are available with a wide variety of actuators and terminals. Underwriters' Laboratories listed. Write today. Detroit Controls, 5900 Trumbull, Detroit 8, Michigan.

AMERICAN-Standard
DETROIT CONTROLS DIVISION

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PYROMETER CONTROLLER
offered in 22 temperature ranges

Millivoltmeter measuring system of the Type Z5 indicating pyrometer controller maintains accuracy within 1/4 per cent of scale and sensitivity under severe plant operating conditions. Automatic reference junction compensation is built in. The two-position electric action will control valves, contactors, heat treat furnaces, salt baths, kilns, and other on-off equipment. It has 22 ranges with −100 and 3000° F bottom and top limits. • **Atlantic Pyrometers, Inc.**, 190 Warburton Ave., Hawthorne, N. J.

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CENTRIFUGE
capacities are 150 and 1000 gph

Coolant clarifying, liquid processing, and particle separation are but a few of the uses for this Lavin centrifuge. It quickly separates solids from liquids and will handle abrasive solutions. Operating on 110 or 220 v ac, two models have capacities of 150 and 1000 gph. A third model is the larger unit equipped with a pump discharge. Respective prices are $320, $420, and $518. They employ continuous flow principle with a rotating basket which traps and holds up to 10 lb of chips, swarf, dirt, or other contamination. Inexpensive baskets are exchanged when loaded. • **A. M. Lavin Machine Works**, Hatboro, Pa.

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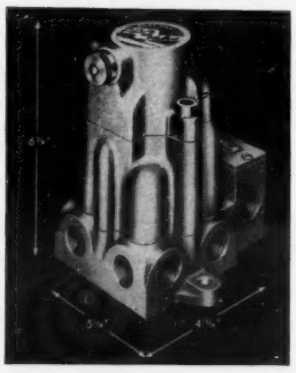
AIR CONTROL VALVE
replaced in less than 1/2 min



Only two replacement parts of the PDQ air control valve are the poppet spindle - sleeve assembly and the solenoid pilot assembly. Valve can be replaced, including the plug-in solenoid, in less than 30 sec. Repacking requires no tools and takes less than 1 min. The 4-lb, 1/2-in. NPT valve will flow 335 cfm at 100 psi initial pressure to the atmosphere. Available tap sizes are 3/8, 1/2, and 3/4 in. • **Hunt Valve Co.**, 2200 E. Pershing Ave., Salem, Ohio.

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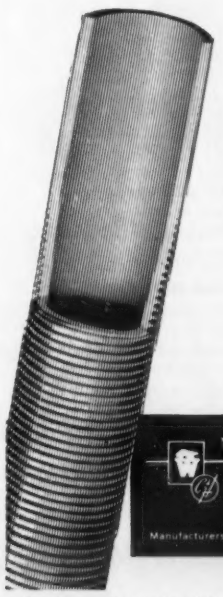

FOR HEAT TRANSFER . . .

FINS THAT CAN'T COME OFF

WRITE

WOLVERINE TUBE
DIVISION OF
CALUMET & HECLA, INC.
17270 Southfield Road
Allen Park, Michigan
Manufacturers of Quality Controlled Tubing and Extruded Aluminum Shapes

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AIM* *for a showing . . .*

"The Acme Steel F1 Strapping Machine"

a new sound, color, 15 minute packaging movie

See this new Acme Steel Company film in your plant. It will show you the most advanced steel strapping unit of its kind . . . how it works . . . how it solves packaging problems . . . how it increases efficiency and economy in bundling and package reinforcement and closure. And how it can serve you.

***Your Acme Idea Man** will show it in your plant. Call him or write: Dept. NBS-10, Acme Steel Products Division, Acme Steel Company, Chicago 27, Illinois.

ACME STEEL **STEEL STRAPPING**

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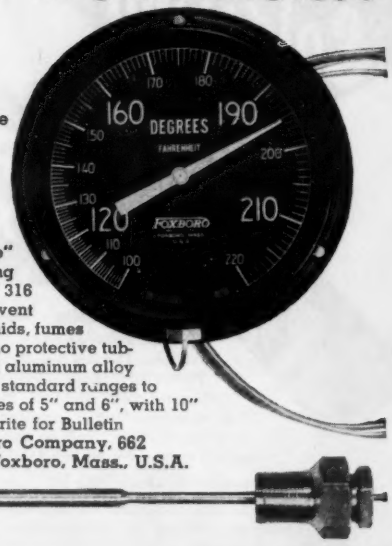
"Lifetime" Dial Thermometers



You're always sure of accurate temperature readings with this easy-to-read Foxboro "Lifetime" Dial Thermometer. Welded "one-piece" bulb and connecting capillary tubing of 316 Stainless Steel prevent corrosion from liquids, fumes or vapors. Needs no protective tubing. Tightly sealed aluminum alloy case. Available in standard ranges to 1000°F. — dial sizes of 5" and 6", with 10" and 12" scales. Write for Bulletin 14-11. **The Foxboro Company, 662 Neponset Ave., Foxboro, Mass., U.S.A.**

FOXBORO Reg. U.S. Pat. Off. DIAL THERMOMETERS

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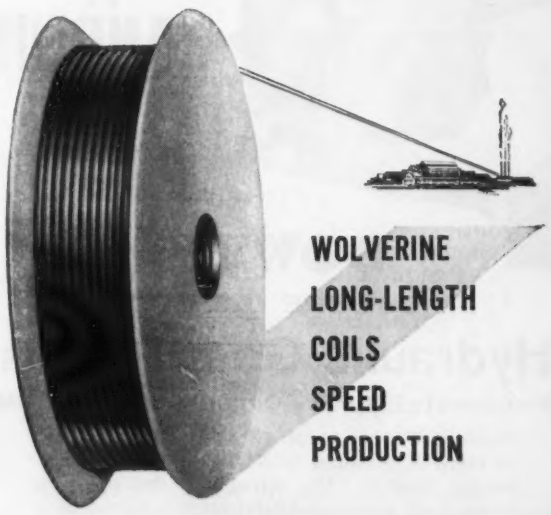

WOLVERINE LONG-LENGTH COILS SPEED PRODUCTION

Write

WOLVERINE TUBE
DIVISION OF
CALUMET & HECLA, INC.
17270 Southfield Road
Allen Park, Michigan
Manufacturers of Quality Controlled Tubing and Extruded Aluminum Shapes

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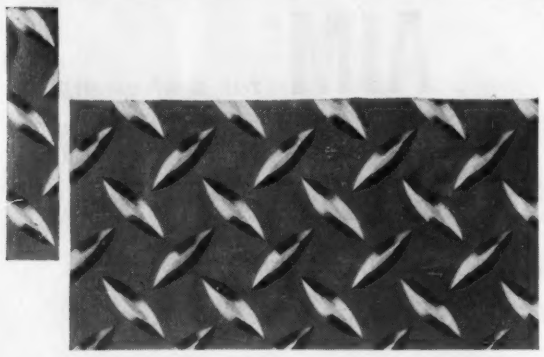

SHEAR IN ANY DIRECTION

Alan Wood Super Diamond Floor Plate

...IS EASY TO MATCH

Non-directional pattern makes matching easy.

- shear it . . . easily cut with standard shop equipment.
- form it . . . arrangement of unique pattern lets you bend it at any place.
- weld it . . . can be easily and quickly welded by ordinary welding methods.

For fabrication ease . . . for safety . . . for long wear . . . specify Alan Wood Super Diamond floor plate.

Write for Bulletin SD-S11.

ALAN WOOD STEEL COMPANY
Conshohocken, Pa.

Manufacturer of the world's only abrasive rolled steel floor plate—A. W. ALGRIP

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Self-Cleaning • Non-Acid • No Running

Just a few strokes of the stik does the trick. There's no mess . . . no waste. Powerful fluxing action goes right through oily and rusty surfaces. No tedious cleaning or wire-brushing . . . assures a perfect union of solder and metal. Safe to use . . . will not pit or corrode metal. **For all Soft Solders.**

Ask your supplier for LA-CO FLUX-Stik . . . *or write us for sample.*

Also in paste and liquid form. Other LA-CO Fluxes for all specialized needs. Write our Engineering Dept. for free help on your flux problems.

LAKE CHEMICAL CO.
LA-CO BRAND
3053 W. Carroll Ave., Chicago 12, Ill.

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A HANDFUL OF POWER

DOWTY

PRESSURE BALANCED

Hydraulic Gear Pumps

Pressures to 2500 PSI • Outputs from 1/2-60 GPM

Shown here is our Model GP2-85 which will deliver 18 GPM at pressures to 2000 PSI. Volumetric efficiency exceeds 95% throughout the operating range. Fully pressurized lubrication independent of discharge pressure. 14 other sizes available.

Berry HYDRAULICS
A DIVISION OF THE OLIVER TYRONE CORPORATION

General Sales Office: Oliver Building, Pittsburgh 22, Pa.

Southern Sales Office and Plant: Corinth 1, Miss.

REPRESENTATIVES IN PRINCIPAL CITIES

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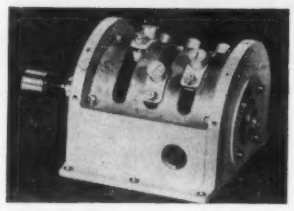
ROTARY SWITCH
for automatic cycling equipment



Power is shut off at the end of each cycle by this rotary switch, then the cycle is automatically restarted unless it is interrupted. Originally developed for punch presses, the switch is now available for the safety control of other types of automatic cycling equipment. It is connected to a solenoid which actuates an adjustable cycle. Basic switch is adaptable to any existing cycling installation, or it can be designed to new machinery specifications. Brush, ring, and insulation withstand arcing caused by circuit induction. Illustrated model breaks 3 amp at 115 v ac. • **Superior Carbon Products, Inc.**, 9115 George Ave., Cleveland 5, Ohio.

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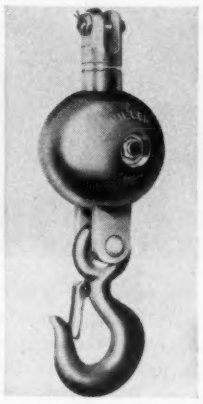
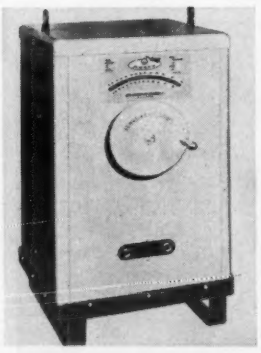
CRANE LINE BALL SWIVEL
prevents twisting of wire rope



This 600-lb Swiveling Headache Ball for whip lines on crane booms 200 ft and over eliminates twisting and kinking of wire. The 10-ton capacity Model HB16 features a precision ball-bearing swivel. It is available in standard clevis, eye, wedge, and thimble rigging. Assemblies assure fast, safe overhaul in wide range of handling operations. • **Miller Swivel Products, Inc.**, Box 938, Pomona, Calif.

▲ For more details circle **NED-54 A** on enclosed inquiry slip ▲

INDUSTRIAL ARC WELDERS
in 200 to 500-amp capacities

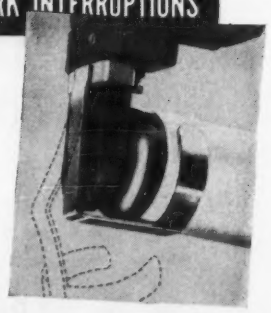


Line of Murex M20 to M50 alternating-current arc welding machines with 200 to 500-amp capacities is designed to NEMA standards for heavy-duty industrial welding. Units exhibit optimum arc characteristics and stability. They have a dual coil transformer, a 75-v open circuit for instant arc starting, and forced air cooling to protect transformer. Rigidly mounted steel shunt, which travels only 1 in. over the full range of current output, eliminates need for moving coils. • **Metal & Thermit Corp.**, Rahway, N. J.

▲ For more details circle **NED-55 A** on enclosed inquiry slip ▲

STOP! INJURIES AND WORK INTERRUPTIONS

from falling fluorescent-tube accidents



Fluorescent tubes sometimes fracture. Vibration and shock may release them from fixtures. Wherever fluorescent lighting is installed there is the possibility of physical injury and property damage resulting from falling tubes.

Don't wait for accidents to happen. For a few cents each you can keep tubes in place, prevent falling, insure against poisoning, contamination and spoilage, avoid injuries, work interruptions and loss of time.

Install Den-El fluorescent lamp guards, easily and quickly, with a screw driver. Permanent, positive protection. Stainless steel. Easily sprung aside for relamping or cleaning. Two guards for each lamp.

Types for all fixtures, also tubes in series

For 40W tubes, per C **$19.00**
For 100W tubes, per C **$22.50**

ORDER TODAY DIRECT

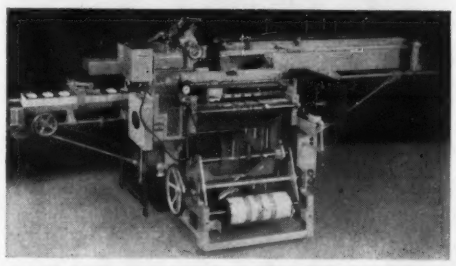
Ask for bulletin, also complete General Scientific catalog of hundreds of other safety equipment items

All orders shipped promptly from Philadelphia

GENERAL SCIENTIFIC EQUIPMENT CO.
7518 Limekiln Pike, Phila. 50, Penna.
HAncock 4-1550

SAFETY EQUIPMENT FOR EVERY HAZARD

▲ For more details circle **NED-56 A** on enclosed inquiry slip ▲



NOW YOU CAN HAVE TOMORROW'S OVER-WRAPPING MACHINE TODAY! Battle Creek's completely new Model 475 successfully handles more than 40 different formulations of soft plastic film . . . your assurance new plastic film developments will not outdate this machine. Change of films requires only electronic heat adjustment. Size changes are made in 15 minutes. Wraps up to 75 per minute within 5" to 12" lengths, 3" to 8½" widths and ¼" to 4" heights. Choose any of these films — polyethylene (medium, low and high density 1 mil and up), polystyrenes, heat sealing cellulose acetates, heat sealing foils, polyvinyl chlorides, cellophanes, polypropylenes or polymer coated films. **Battle Creek *"Continuous Flow"* Packaging Machines, Inc., Battle Creek, Michigan.**

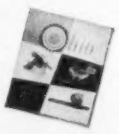
▲ For more details circle **NED-57 A** on enclosed inquiry slip ▲

80% More Capacity—Far Less Space

HI . . . in capacity—will handle up to double the load.
HI . . . in versatility—More load with no increase in size or weight.
HI . . . in performance—Fin and fan cooled for greater capacity with less heat rise.
HI . . . in value—all new design for long life and minimum maintenance.

HI-Line reducers are available in six new series ranging from 1.33" to 5.25" centerdistance. Standard models in each series include vertical with high or low base and horizontal models with worm upper or lower.

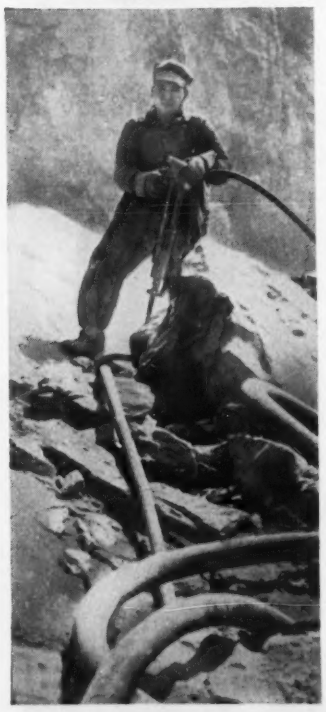
Write for free Catalog



Manufacturers of gears and speed reducers-both stock and special

Ohio OHIO GEAR Company
1402 East 179th St. • Cleveland 10, Ohio

▲ For more details circle **NED-58 A** on enclosed inquiry slip ▲



HOMOFLEX AIR HOSE

"FLEXIBLE AS A ROPE"

- **STRONG**
- **LIGHT**
- **KINKLESS**

More flexible and lighter than any other hose for equal pressure. Lasts longer, precision built, uniform diameter, lower end cost. Made also in extra-heavy type for mining.

Write for Catalog M610.

RM 1014

Engineered Rubber Products . . More Use Per Dollar

RAYBESTOS-MANHATTAN, INC.
MANHATTAN RUBBER DIVISION, PASSAIC, NEW JERSEY

▲ For more details circle **NED-59 A** on enclosed inquiry slip ▲

PLAIN • GEARED • FLANGED
BALL OR ROLLER BEARING WHEELS

STANDARD AND SPECIAL PRODUCTS BY GREY HUB ARE USED BY LEADING MANUFACTURERS OF MATERIAL HANDLING EQUIPMENT IN EVERY INDUSTRY

GREY HUB TROLLEY WHEEL CO.

MANUFACTURERS SINCE 1921

17265 Gable Ave. • Detroit 12, Mich., U. S. A.

▲ For more details circle NED-60 A on enclosed inquiry slip ▲

air compressors

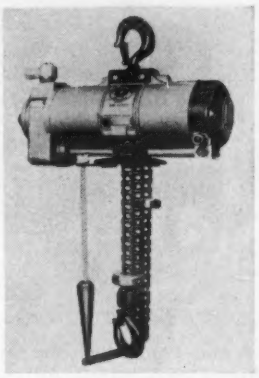
Over a half century of engineering progress is built into every Kellogg-American compressor. This is only one reason why we are a recognized leader in the compressor field. Kellogg-American produces over 250 different standard models. Buy from the company that supplies major manufacturing industries.

WHAT ARE YOUR NEEDS?
For full details on how compressed air can make your job easier, save you time and money, write to:

Kellogg-American
DIVISION
SCAIFE COMPANY • OAKMONT (Pgh. District) PA.

▲ For more details circle NED-61 A on enclosed inquiry slip ▲

OVERHEAD AIR HOISTS
1000 and 2000-lb capacity units



Both piston-motor and rotary-motor types are available in these lightweight heavy - duty overhead air hoists. Model 86R-10 has 1000-lb load capacity and lifts at rate of 40 fpm. The 2000-lb capacity Model 86R-20 lifts at 20 fpm. Standard equipment includes safety suspension hook, safety load hook, roller chain or link chain for 8-ft of lift, rope control, swivel air inlet, air strainer, and safety stops. Chain for 10-ft lift, and safety cable and clamps are optional. • **Gardner-Denver Co.**, 1350 Front St., Quincy, Ill.

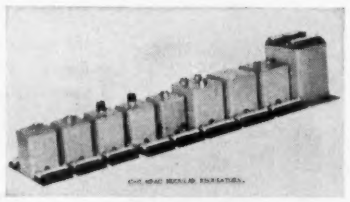
▲ For more details circle NED-63 A on enclosed inquiry slip ▲

BANDSAW BLADE
made of long-wearing alloy steel

High proportion of vanadium carbide in the Jet Band alloy steel bandsaw blade enables it to resist abrasion and fatigue, yet have high flexibility. On standard machines at regular speeds and feeds it reportedly cuts a wider variety of materials than carbon bands, yet outlasts them by a 3-to-1 margin. It matches the performance of high speed steel bands with a savings in cost on high production equipment. • **Millers Falls Co.**, Greenfield, Mass.

▲ For more details circle NED-64 A on enclosed inquiry slip ▲

STATIC REGULATORS
line includes 10 modular units



Line of mPAC static regulators is suited for control of motor or generator fields, speed regulators, current regulators, time rate, or current limit. Ten "building block" modules include adjustable time reference unit, power supply, reference regulator, 15-v comparator, 30-v comparator, power amplifier, cross-over unit, adjustable current limit unit, low level current amplifier, and 6-v bias supply. Originally used in packaged direct current drives and mill processing line control, the regulators are now available to panel builders, control assemblers, and custom designers. • **Cutler-Hammer Inc.**, 574 N. 12th St., Milwaukee 1, Wis.

▲ For more details circle NED-65 A on enclosed inquiry slip ▲

What makes it RIGHT for you?

The right fastener for YOUR needs is one that is specifically designed, engineered and manufactured to meet your production requirements precisely. Fabricated from the most suitable metal and provided with the right finish, it must combine secure fastening with maximum speed and ease of assembly.

If you're looking for the right fasteners, Stanley-Humason has the engineering experience and ability needed to analyze your requirements and develop the best possible designs to meet them exactly . . . and the complete, modern production facilities needed to produce your fasteners efficiently and make prompt deliveries keyed to your own production schedules.

FOR ADDITIONAL INFORMATION . . . send for data sheets on Flat Spring, Retaining Ring, Hour Glass or Screw Machine Type Fasteners, and Special Application Nuts . . . or simply write, outlining your fastener requirements. Also available are data sheets on assembled products, metal stampings, screw machine parts and wire forms.

STANLEY-HUMASON, INC.
A Subsidiary of The Stanley Works
Dept. A, 58 Stafford Ave.
FORESTVILLE, CONNECTICUT
STANLEY ®

SPRINGS • WIRE FORMS • STAMPINGS • SCREW MACHINE PRODUCTS • ASSEMBLIES

▲ For more details circle NED-62 A on enclosed inquiry slip ▲

2 STYLES INVENTORY TAGS IN STOCK ALWAYS

ESTABLISHED 1893
Campbell

QUALITY PACKAGING SINCE 1893.

CAMPBELL BOX & TAG CO.
DIVISION OF STONE CONTAINER CORPORATION
MAIN & NEW STREETS SOUTH BEND 23, INDIANA

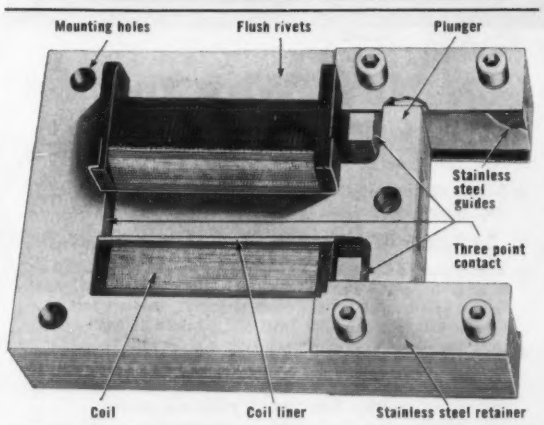
▲ For more details circle NED-66 A on enclosed inquiry slip ▲

TROMBETTA SOLENOID CORP.
MILWAUKEE WISCONSIN
U.S.A
329 N. Milwaukee Street • Phone BRoadway 1-8347

NA-700 LINE OF SOLENOIDS
The ultimate design in Guided T Plunger Solenoids

Patented March 10, 1959
Developed in 1952
Patent No. 2,877,390

WE DESIGNED THEM!
WE DEVELOPED THEM!!
WE PATENTED THEM!!!
THEY ARE OURS!!!!



No clatter! No chatter!!

FEATURES
Positive three point contact
Heavy stainless steel guides

RESULTS
Longest life expectancy; reliable operation throughout entire life; silent operation in sealed position; mountable in any position, at any angle; no heavy grease required to cover up poor design; no grunting when mounted horizontally.

AVAILABLE
In a multitude of standard sizes, pull or push type; also custom built to satisfy customer's requirements; also for OEM, and replacement trade.

TROMBETTA has the original solenoid.
Don't let anyone sell you imitations.
Request additional information.

"TROMBETTA"
is the answer to:
ALL SOLENOID QUESTIONS

▲ For more details circle NED-67 A on enclosed inquiry slip ▲

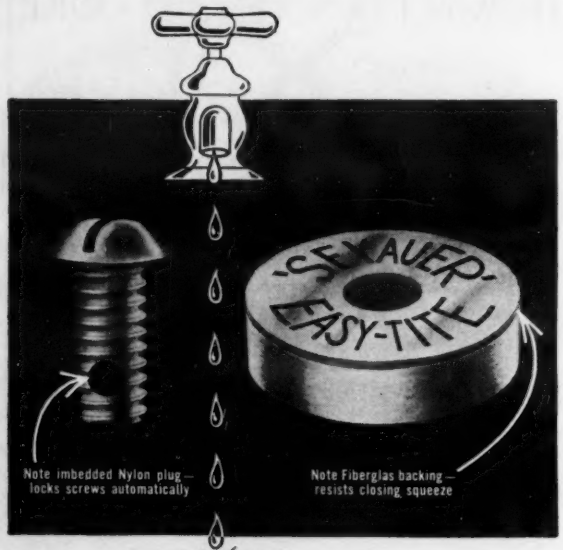
Provides proven protection from pneumoconiosis-producing and nuisance dusts

This popular respirator weighs less than 5 ounces, is easy to wear . . . practically unbreakable. More than 40 sq. inches twin filter area. Check valves guard against re-breathing stale air. Free literature on request describing full line of models. Order sample today from your safety equipment supplier or write direct—$3.25 postpaid.

H. S. COVER
Dept. 105, South Bend 14, Indiana

"Respirators for Industry Since 1894"

▲ For more details circle NED-68 A on enclosed inquiry slip ▲



New Way to Stop Faucet Leaks!

★ 9-in-10 washers are fastened with TOO LONG or SHORT SCREWS thus loosen and destroy themselves. Leaks quickly follow!

34 YEARS OF RESEARCH REVEALS NEW SOLUTION

★ New, patented 'Sexauer' SELF-LOCK screws have imbedded expanding NYLON PLUG. They lock at required depth AUTOMATICALLY, hold washers firmly! Made of MONEL, they are rustproof, non-corroding. Heads can't twist off. Screw slots can't distort.

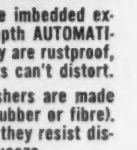
★ NEW, improved 'SEXAUER' EASY-TITE faucet washers are made of super-tough, pliable du Pont compound (not rubber or fibre). Reinforced with a vulcanized layer of Fiberglas, they resist distortion and splitting from shut-off grind and squeeze.

★ Faucet leaks repaired with 'Sexauer' EASY-TITE faucet washers and SELF-LOCK screws outlast ordinary repairs "6-to-1"!

HIDDEN COSTS OF FAUCET LEAKS!

Hackensack, N. J. Water Co. and American Gas Association figures prove stopping just ONE PIN-HOLE SIZE (1/32") LEAK saves you 8,000 gal. water quarterly. A HOT WATER FAUCET LEAK repair saves you over $7.58 QUARTERLY in fuel and water bills. Fewer leaks also produce important savings on MATERIALS, LABOR and COSTLY FIXTURE REPLACEMENTS!

A 'Sexauer' Technician will make available our NEW Catalog, Edition "J", listing our entire line of over 3,000 TRIPLE-WEAR plumbing repair parts and tools. He will survey your fixtures, determine the repair parts needed and establish an efficient stock arrangement and control to prevent costly overstocking or shortages. You get this service without obligation. *Act now!*

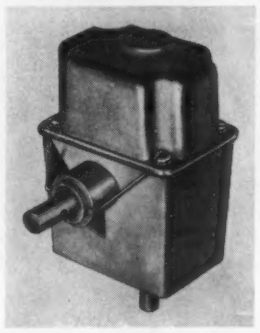


J. A. Sexauer Mfg. Co., Inc., Dept. AU-10
2503-05 Third Ave., New York 51, N.Y.
Please send me a copy of your NEW Catalog "J"
Name_____ Title
Organization_____
Bus. Address_____
City_____ Zone_____ State_____

SEXAUER
WORLD'S LEADING SPECIALISTS IN PLUMBING AND HEATING REPAIR PARTS

▲ For more details circle NED-69 A on enclosed inquiry slip ▲

GEAR BOX
right or left hand, right angle unit

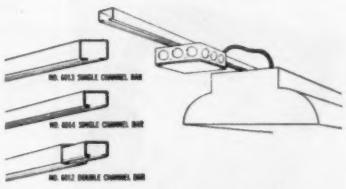


Gasoline engines up to 2½ hp can be used with the Micro right angle gear box on conveyors, lawn mowers, and other types of equipment. The 3:1 ratio unit is stocked for either right or left hand applications. The 6½ x 4⅝ x 3½-in. drive has four mounting holes on 2 9/16 x 1 19/36-in. centers. Input and output shafts are 7/16, and ½ in., respectively, and can be furnished with a keyway. • **Micro Gear, Inc.**, Prophetstown, Ill.

▲ For more details circle NED-70 A on enclosed inquiry slip ▲

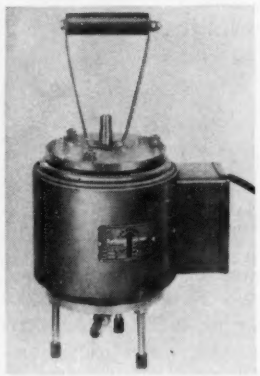
GALVANIZED STEEL CHANNELS
support electrical equipment

Hanging of electrical box units, fixtures, and conduits is simplified with multipurpose Channel Bar, made of electrogalvanized steel. The 0.281-in. continuous slotted opening accommodates and permits easy positioning of channel carriers, box fasteners, conduit clamps, or simple ¼-in. square nut and threaded rod. Two sizes which can be used separately or one inside the other measure 0.388 x 0.576 in. and 0.263 x 0.451 in. • **Steel City Electric Co.**, 1209 Columbus Ave., Pittsburgh 33, Pa.



▲ For more details circle NED-71 A on enclosed inquiry slip ▲

CENTRIFUGAL TRANSFER PUMP
handles corrosive liquids, solvents



Pump unit of the El-10 centrifugal transfer pump is inside the motor housing and is magnetically driven by the ⅛-hp 115-v single-phase motor. Pump is used to transfer corrosive liquids and solvents without leakage at maximum flow of 20 gpm and maximum head of 25 ft. Liquids with 1.5 specific gravity can be handled. Working pressures range up to 150 psi. Motor is Class A insulated for fluid temperatures to 210° F, although Class H insulation for 350° F fluids is available. Pump is equipped with stainless steel legs, and carrying bracket, and 15 ft of pure gum chemical or polyvinyl hose. • **Sethco Mfg. Corp.**, 2284 Babylon Turnpike, Merrick, L. I., N. Y.

▲ For more details circle NED-72 A on enclosed inquiry slip ▲

HOW TO CUT COSTS with BELT CONVEYORS

new catalog 80 tells how . . .

GET YOUR COPY TODAY!

Learn how you can save valuable floor space . . . cut maintenance costs . . . by using BUSCHMAN Light-to-Medium Belt Conveyor Stock Components arranged to your exact requirements. Write for "Catalog 80" today!

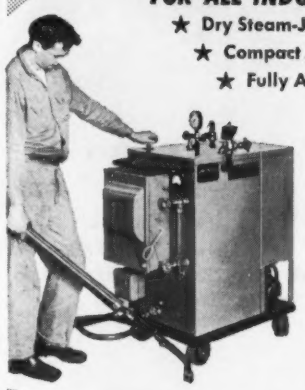
Every Way Better C-351-EWB
THE E. W. BUSCHMAN CO.
4482 Clifton Avenue Cincinnati 32, Ohio

EWB
CONVEYORS FOR EVERY INDUSTRY

▲ For more details circle NED-73 A on enclosed inquiry slip ▲

SAFE
FOR ALL INDOOR CLEANING

★ Dry Steam-Jet Action
★ Compact . . . Portable
★ Fully Approved, Economical



Flick a switch and clean *anywhere* in your plant! No flooding of work areas—high pressure, dry steam-detergent action avoids excess water on floors or equipment. Completely packaged—easily maneuvered on rubber-tired, ball bearing, swivel wheels!

SPEEDYLECTRIC
THE ELECTRODE STEAM BOILER
STEAM-JET CLEANER

Standard unit (illustrated) and Hydro Steam-Jet models described in Bulletin JC-100. Write for it. PANTEX also builds fuel-fired steam-jet cleaners. Write for Bulletin SC-500.

Pantex STEAM GENERATOR DIVISION
MANUFACTURING CORPORATION
Box 660 Z, Pawtucket 1, R. I.

▲ For more details circle NED-74 A on enclosed inquiry slip ▲

BEACON'S

*Patented

New Process*

Creates Durable Fibreboard Tote Boxes That Are

AMAZINGLY RIGID
FIREPROOF
TARNISH PROOF
LIGHTWEIGHT
ECONOMICAL
SPACE SAVING

Nesting & Shelf Styles Also Available

Write For Free Sample

BEACON BOXES, INC.
P.O. Box 483N
Massillon, Ohio

▲ For more details circle NED-75 A on enclosed inquiry slip ▲

High Pressure
LOW MAINTENANCE

with John BEAN pumps

STANDARD PUMP CAPACITIES* to 12,000 PSI

	INSIDE PACKED		OUTSIDE PACKED	
	Pressures to	Liquid Temp. to	Pressures to	Liquid Temp. to
Vertical Duplex	500 psi	160° F.	1,000 psi	200° F.
Horizontal Triplex	800 psi	160° F.	12,000 psi	500° F.

- Lifetime sapphire cylinders or plungers.
- "Roto-splash" lubrication of all drive end parts.
- Distortion-free cast iron housings maintain constant bearing alignment.
- Free-acting, ball-type and spring loaded poppet valves, replaceable valve seats make for easier maintenance.

Also: Packaged power pumping units • Custom-designed pumps • High pressure washers

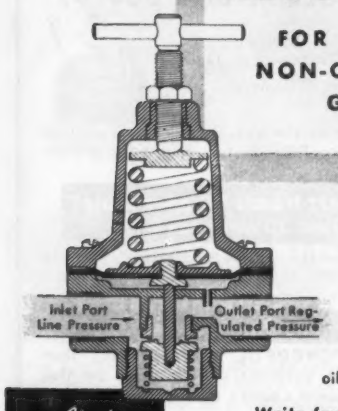
Send information request form—today!

John BEAN DIVISION OF FOOD MACHINERY & CHEMICAL CORP. fmc
INDUSTRIAL SALES DEPARTMENT
LANSING MICHIGAN • SAN JOSE, CALIFORNIA

▲ For more details circle NED-76 A on enclosed inquiry slip ▲

Norgren PRESSURE REGULATORS

FOR AIR AND NON-CORROSIVE GASES



Highly Accurate over a wide operating range.

Regulated Pressure Held Constant

Large Flow Capacity

Also regulators for water, oil, other liquids, and steam.

Write for Descriptive Literature

If it's Norgren... It's Dependable.

C. A. NORGREN CO.

3405 So. Elati St. Englewood, Colorado

▲ For more details circle NED-77 A on enclosed inquiry slip ▲

PADDED SHIPPING BAG
has a tear tape opener

Redesigned easy-opening Jiffy padded shipping bag features a repositioned seam for greater printing area, waterproof adhesive joining, and an outer liner of golden Clupak extensible kraft paper of 70-lb weight. For the first time the bag will have a tear tape opener for simplified opening. Back of the bag is available for special imprints or instructions. • Jiffy Mfg. Co., 360 Florence Ave., Hillside, N. J.

▲ For more details circle NED-80 A on enclosed inquiry slip ▲

INSTRUMENT & PANEL LIGHT
offers nonglare illumination

Prisms are used by the Bolt-Lite to control the upper and lower light limits, thus minimizing eye strain. The light is designed for illuminating instruments, instrument panels, controls, and other applications requiring subdued, nonglare light. The illumination pattern is accurately predetermined. Unit is available in 6, 12, and 28-v models. Typical dimension is 1.5 in. over-all length with 10-32 stud mounting. • Glar-Ban Corp., 3807 Harlem Rd., Buffalo 15, N. Y.

▲ For more details circle NED-81 A on enclosed inquiry slip ▲

ELECTRIC HAMMER-DRILL
hammer-turn action speeds drilling

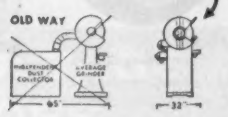
Models 726 and 736 electric Roto-Hammers will hammer with simultaneous power rotation, hammer without rotation, or drill without hammering. With carbide bits, this hammer-turning action triples the speed of drilling a ¾-in. hole in masonry. Three-way operation is accomplished by combination electro-pneumatic drive and constantly rotating inner barrel. General-use Model 726 will drill ¼ to 1-in. holes, whereas Model 736 will make 1 to 2-in. holes. Special percussion-type carbide bits will drill 1000 holes before sharpening is required. Features include contour grip handles and built-in depth gage. Almost 100 accessories are available to handle any drilling or hammering requirement. • Skil Corp., 5033 N. Elston Ave., Chicago 30, Ill.

▲ For more details circle NED-82 A on enclosed inquiry slip ▲

Hammond of KALAMAZOO

2 IN 1 NO-DUST GRINDER

SAVE OVER 50% FLOOR SPACE THE HAMMOND WAY



DUST-LADEN AIR IS A MENACE!

- Protect your employees' health.
- Protect nearby machine tools from dust and grit.
- Save floor space — requires only 6½ square feet. For 10", 12", and 14" wheels. Write for Catalog.

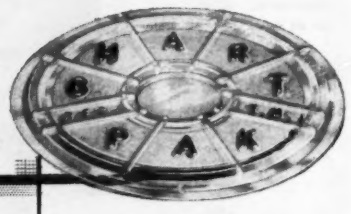
Hammond Machinery Builders INC.

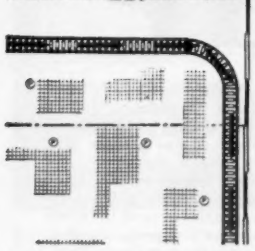
1623 DOUGLAS AVENUE KALAMAZOO, MICHIGAN

▲ For more details circle NED-84 A on enclosed inquiry slip ▲

Chart-Pak Tapes for Plant Layouts now in NEW TAPE-SAVER DISPENSER . . . at no extra cost!

- ONLY CHART-PAK HAS IT!
- Keeps tape edges clean
- No waste . . . use every inch
- Easy spindle storing
- Protected from damage





Make plant layouts in minutes . . . with Chart-Pak pressure-sensitive tapes and templates. Saves the time and tedium of drawing, and are absolutely dependable for accuracy. Tapes and templates stick firmly, adhesive will not melt under heat of reproduction, yet can be easily lifted and relocated for corrections and revisions.

Write for full details, or consult your Yellow Pages under "Charts-Business."

Saves Time . . . Saves Money!

CHART-PAK, INC.

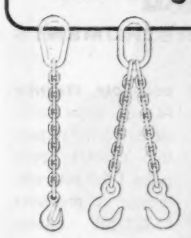
ORIGINATOR OF THE TAPE METHOD OF DRAFTING

361 River Road, Leeds, Mass.

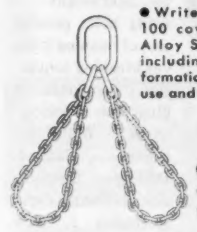
▲ For more details circle NED-78 A on enclosed inquiry slip ▲

HERC-ALLOY

The Original Alloy Chain



• Has many superior features—is lighter, therefore easier to handle...is long wearing...has high resistance to impact loading...is Inswell welded. Chain and all fittings are 125,000 p.s.i. tensile strength alloy steel.



• Write for Bulletin 100 covering Herc-Alloy Sling Chains, including helpful information on their care, use and inspection.

• Sold in running lengths, slings assembled to customers' specifications and other special assemblies.

CM CHAIN

COLUMBUS McKINNON CHAIN CORP.

TONAWANDA, NEW YORK

NEW YORK • CHICAGO • CLEVELAND

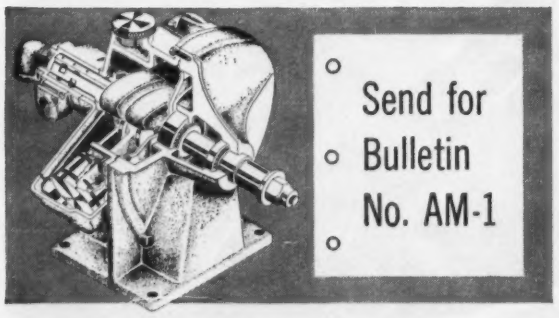
SAN FRANCISCO • LOS ANGELES

In Canada: McKinnon Columbus Chain Ltd., St. Catharines, Ont.

HERC-ALLOY®

▲ For more details circle NED-85 A on enclosed inquiry slip ▲

Start heavy loads smoothly with high-torque air motor



Send for Bulletin No. AM-1

Here's an air motor that develops high starting torque . . . maintains smooth power under all speed and load conditions. Gardner-Denver's 5-cylinder design provides overlapping power impulses. At least two cylinders are always on power stroke—three during part of cycle. Starts heavy loads easily . . . accelerates smoothly. Six sizes from 2 to 16 hp. Direct drive or built-in gear reduction. Reversible and nonreversible models.

EQUIPMENT TODAY FOR THE CHALLENGE OF TOMORROW

Gardner-Denver Company, Quincy, Illinois
In Canada: Gardner-Denver Company (Canada), Ltd., 14 Curity Avenue, Toronto 16, Ontario

GARDNER-DENVER

▲ For more details circle NED-79 A on enclosed inquiry slip ▲

Rugged rotary air motors for low hp, heavy-duty service

Send for Bulletin No. 71

Compact rotary vane air motors designed by Gardner-Denver for low hp needs requiring heavy-duty service. Develop from ⅛ to 1½ hp. Ideal for jobs requiring quick starts and stops, continuous service or sparkless operation. All moving parts mounted in anti-friction ball or needle bearings. Plus the basic air motor advantages: positive, instantaneous control . . . continuous operation . . . no spark hazard . . . can't burn out. Can be mounted in any position.

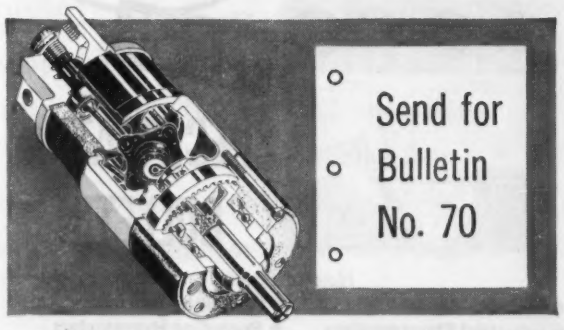
EQUIPMENT TODAY FOR THE CHALLENGE OF TOMORROW

Gardner-Denver Company, Quincy, Illinois
In Canada: Gardner-Denver Company (Canada), Ltd., 14 Curity Avenue, Toronto 16, Ontario

GARDNER-DENVER

▲ For more details circle NED-83 A on enclosed inquiry slip ▲

Compact axial-piston air motor cuts limited-space problems



Send for Bulletin No. 70

Gardner-Denver axial-piston design packs 2.7 hp in 6³⁄₁₆" dia. x 13¾", weighs 38 lb.—permitting use in places where space is limited. Rigid spindle, heavy-duty bearings and rugged case give this air motor the ability to carry an overhung load as great as 1000 lb. with no external spindle support. Speeds to 2600 rpm. Starting torque to 82 ft.-lb. Variable speed. Reversible. Nonsparking. Works in heat, moisture or dust. Can be mounted at any angle. Other sizes from 0.6 to 2.7 hp

EQUIPMENT TODAY FOR THE CHALLENGE OF TOMORROW

Gardner-Denver Company, Quincy, Illinois
In Canada: Gardner-Denver Company (Canada), Ltd., 14 Curity Avenue, Toronto 16, Ontario

GARDNER-DENVER

▲ For more details circle NED-86 A on enclosed inquiry slip ▲

New GEMCO ROTATING CAM LIMIT SWITCH

PRECISION CAM ADJUSTMENT WITH A SCREW DRIVER . . . IN SECONDS!

One type cam . . . no special cam lobes required.

Snap Action Switches, N. O. and N. C.—electrically separated

2 through 12 circuits. Available in NEMA 1, 4, 5, 7, 9 and 12 enclosures.

Please send Bulletin 558 for complete story of new Gemco Rotating Cam Limit Switches.

NAME _____

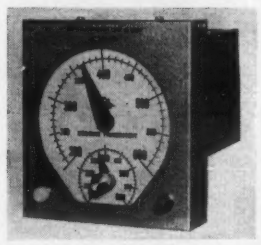
COMPANY _____

CITY _____ ZONE _____ STATE _____

GEMCO ELECTRIC COMPANY
25685 West Eight Mile, Detroit 40, Mich.

▲ For more details circle NED-87 A on enclosed inquiry slip ▲

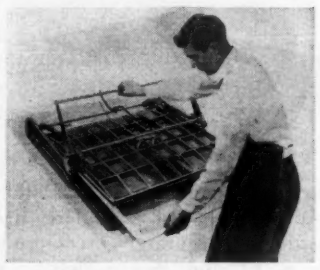
INDICATING TEMPERATURE CONTROL
is time proportioning or on-off



Accurate time proportioning or on-off control of process temperatures, with or without anticipating, is afforded by this Series 6000 indicating temperature controller. It has a 12-in. circular readout based on a stable null balance servo principle. Large figures and indicating pointer permit distant reading. Control stability can be within 0.1° F. Plug-in plastic-encapsulated circuitry assures freedom from dust and moisture and protects instrument from shock and vibration, thus permitting mounting directly on machines or equipment. ● Electronic Processes Corp. of Calif., 436 Bryant St., San Francisco 7, Calif.

▲ For more details circle NED-90 A on enclosed inquiry slip ▲

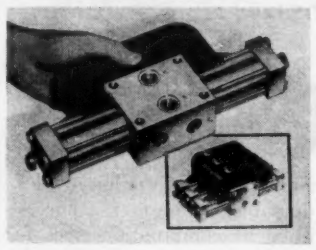
LAMINATING PRESSES
seal paper or cards in film



Drawings, prints, passes, photo copies, magazine reprints, and many other objects on paper or card stock are laminated with film on both sides in 15 sec by Seal dry mounting presses. Sealamin film used is offered in 11⅛-in. wide, 200-ft long rolls, sufficient to laminate 140 prints measuring 8½ x 11 in. Cost is less than 10 cents each. Five press sizes range in price from $61.95 to $359.95. ● Seal, Inc., 45 Waggoner, Shelton, Conn.

▲ For more details circle NED-91 A on enclosed inquiry slip ▲

SOLENOID VALVES
lightweight units rated at 3000 psi



Inrush current has been eliminated in this line of four-way alternating current solenoid valves, making possible fast cycling without excessive heating. They have an aluminum alloy body and heat treated steel spools and sleeves, and weigh less than 5 lb with two solenoids. Closed-center, tandem, and two-position designs are rated 3000 psi and have a pressure drop of 60 psi at 5 gpm. Valves can be stacked or banked in virtually any number with tie rod and seal kits offered. The JIC units are available for 110 or 220-v operation. ● Waterman Hydraulics Corp., 725 Custer Ave., Evanston, Ill.

▲ For more details circle NED-92 A on enclosed inquiry slip ▲

Go-Jo HAND CLEANER Dispenser

SAVES 75% ON "CLEAN-UP" COSTS!

Ends "Grab-a-handful" Waste!!

Portion measured out by the one-shot dispenser averages ¼ the "hand-scoop" quantity...ample for a thorough "clean-up."

Gets Even Grimiest Hands "Dinner-table" Clean in Just 30 Seconds!!

Removes deeply imbedded grease and grime. Easily wiped or rinsed off. No expensive and time-consuming second and third washings.

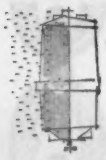
Helps Prevent Industrial Dermatitis!!

Contains GT-7, A POWERFUL ANTISEPTIC, that helps protect against dermatitis and other painful skin irritations - frequent causes of absenteeism.

Write today for FREE folder or 30-day demonstration.

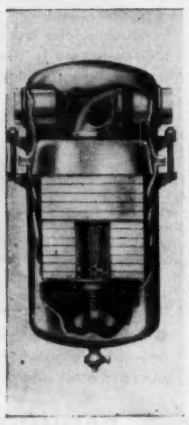
GOJER INC., Dept. N-160 BOX 991 AKRON 9, OHIO

▲ For more details circle NED-94 A on enclosed inquiry slip ▲



DOLLINGER DRY FILTER *Specialists for 39 years*

KEEP DIRT, MOISTURE FROM PNEUMATIC INSTRUMENTS



DOLLINGER STAYNEW FILTERS allow only clean dry air to pass into delicate apparatus. Offer peak efficiency at pressures to 125 psi . . . durable, lightweight . . . swing bolts provide ease of cleaning without breaking connection. Available in pipe sizes from ¼" to 4". Write for Composite Catalog. Dollinger Corporation, 49 Centre Park, Rochester 3, New York.

STAYNEW DOLLINGER FILTERS

▲ For more details circle NED-88 A on enclosed inquiry slip ▲

WEKSLER INSTRUMENTS NEW SPECIFICATION BULLETIN

How to Specify:

- Pressure Gauges
- Industrial Thermometers
- Dial Thermometers
- Recording Thermometers
- Recording Hygrometers
- Bi-Metal Dial Thermometers

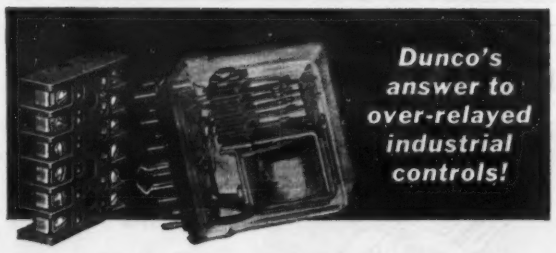
Engineers, architects and contractors are finding this Weksler Specification Bulletin a great time saver!

Designed for "at a glance" information and specifications on Weksler instruments most frequently specified for indicating and recording temperature, pressure and humidity, the bulletin illustrates and describes most of the basic instruments needed in air-conditioning, heating, ventilating, plumbing and piping.

WRITE FOR YOUR COPY OF THE WEKSLER SPECIFICATION BULLETIN

WEKSLER INSTRUMENTS CORP.
FREEPORT, L.I., NEW YORK

▲ For more details circle NED-89 A on enclosed inquiry slip ▲



Dunco's answer to over-relayed industrial controls!

An important RELAY FOR INDUSTRIAL CONTROL!

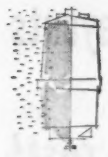
This sturdy, moderately priced unit says "good bye" to any need for using costly, oversize relays to insure real industrial control dependability! Equipped with heavy duty 12-pin plugs and industrial-type sockets, Dunco 219 Frame Relays have proved outstandingly successful on lab-type "tail chasing" circuits and on numerous machine control installations requiring complete dependability and long life (20 million operations.)

10 amp. current-carrying parts. 150 v. electrical spacings. Withstand 1500-v dielectric test. Three standard contact arrangements at *minimum* prices facilitate circuitry standardization and simplify replacement.

Write for Dunco Bulletin 2219.

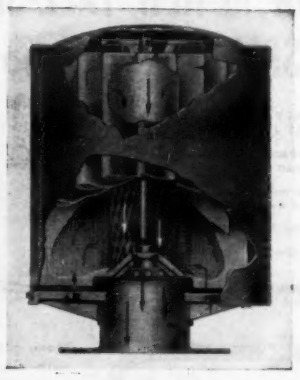
S-D STRUTHERS-DUNN, Inc.
PITMAN, N. J.
World's Largest Assortment of Relay Types

▲ For more details circle NED-93 A on enclosed inquiry slip ▲



DOLLINGER DRY FILTER *Specialists for 39 years*

Filters for internal combustion engines and compressors



DOLLINGER STAYNEW FILTERS are ideal for engines and compressors. Utilizes best filtering medium possible . . . offers greatest active filtering area for available space . . . maintains low velocity, low resistance to flow. Easy to install, simple to clean and inspect. Offered in capacities from 60 to 10,000 C.F.M. Write for Composite Catalog. Dollinger Corporation, 49 Centre Park, Rochester 3, New York.

STAYNEW DOLLINGER FILTERS

▲ For more details circle NED-95 A on enclosed inquiry slip ▲

Look what an M-B Line Marker does!

Easy to operate, low in cost, M-B Line Markers are your best buy for fast marking of safety lines in aisles, around machines, storage areas, etc. — preventing possible accidents and guiding production flow. Self or hand-propelled models lay up to 10,000 feet of line per hour . . . single or double lines, solid or intermittent, 3" to 6" width. Send today for complete details on the most versatile line marker, especially designed for industrial use. The M-B Corporation, New Holstein, Wisconsin.

M-B CORPORATION NEW HOLSTEIN, WIS. Refuse Packers · Line Stripers · Sweepers

QUALITY EQUIPMENT SINCE 1907

▲ For more details circle NED-96 A on enclosed inquiry slip ▲

GENERAL ELECTRIC

POWER AMPLIFIERS

New high-speed-of-response power amplifiers—now available—offer designed-in characteristics especially suitable as control or power source on high-performance or servo motor systems. Response improved 6 to 8 times over standard ratings. Exceptionally versatile in controlling voltage, current, speed and position on a variety of applications which require fast response. *Direct Current Motor & Generator Dept., General Electric Company, Erie, Pennsylvania.*

▲ For more details circle **NED-97 A** on enclosed inquiry slip ▲

GENERAL ELECTRIC

SERVO MOTORS

Now direct-current drive motors designed specifically for automatic control systems. New General Electric servo motors with compensated windings offer fast response, low time constant, linear torque per ampere and low inertia. Used with the new G-E power amplifier, servo motors can be applied to improve characteristics of many high performance systems. *Direct Current Motor and Generator Department, General Electric Company, Erie, Pennsylvania.*

▲ For more details circle **NED-98 A** on enclosed inquiry slip ▲

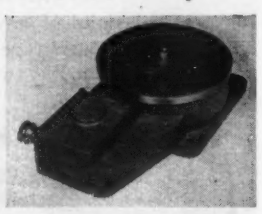
GENERAL ELECTRIC

MULTIPLE-OUTPUT GENERATORS

A new General Electric multiple-output generator makes it possible to drive several adjustable-voltage loads from a single generator—provides light weight, space-saving generating equipment for several independent drive motions. New design has compensating windings arranged so that independent field windings can control power output on any set of brushes. *Direct Current Motor and Generator Department, General Electric Company, Erie, Pennsylvania.*

▲ For more details circle **NED-99 A** on enclosed inquiry slip ▲

ROTARY INDEX TABLES
feature slow start and slow stop



Fractional horsepower electric motor, rotary air motor, or hydraulic motor furnishes the power for this line of rotary index tables. Locking and indexing are entirely mechanical. A 40-to-1 ratio worm gear drive rotates a cam to provide an accurate lock on 180 degrees of the rotation and smooth turning motion on the other 180 degrees of rotation. An indexing pawl gives the worktable a slow start and slow stop motion. Up to 5000 indexes per hour with relatively heavy fixture loads can be realized. Table is offered with 10 or 18-in. diameter top and from 4 to 12 stations. Larger tables and special station setups can be specified. ● **Jackson Fluid Power Co.**, 16722 E. Warren Ave., Detroit 24, Mich.

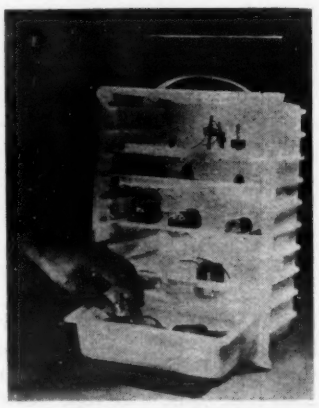
▲ For more details circle **NED-100 A** on enclosed inquiry slip ▲

STAINLESS PITOT TUBES
made in 6 and 12-in. lengths

Spring-like quality of the hypodermic needle grade stainless steel used in these pitot tubes allows them to be flexed without damage and used at temperatures up to 800° F. They have a $\frac{1}{8}$-in. OD and lengths of 6 or 12 in. Their accuracy adapts them for use in duct diameters of 4 in. or less and pipes as small as $\frac{1}{2}$ in. All joints are silver soldered. The hemispherical tips are difficult to damage. ● **F. W. Dwyer Mfg. Co.**, Dept. ND-5, Box 373, Michigan City, Ind.

▲ For more details circle **NED-101 A** on enclosed inquiry slip ▲

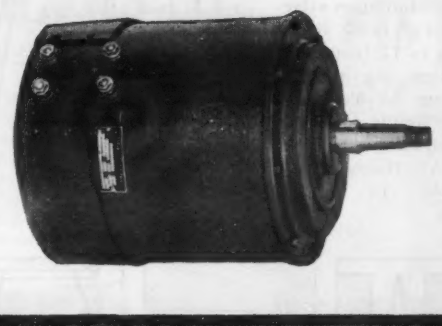
DELICATE PARTS CASE
thermoformed of polyethylene



Combination carrying case and storage cabinet for delicate electronic and other parts resists corrosive chemicals and is unaffected by a wide range of temperatures. It is thermoformed of non-breakable Grex high density polyethylene and can be washed, sterilized, or cleaned by air blast. The case has a carrying handle, and a sliding plastic front. Trays and bottom drawer accommodate parts of varying sizes. They can be designed to hold specific items. Average price is $12.50. ● **Highland Products**, Richards Avenue, Dover, N. J.

▲ For more details circle **NED-102 A** on enclosed inquiry slip ▲

GENERAL ELECTRIC

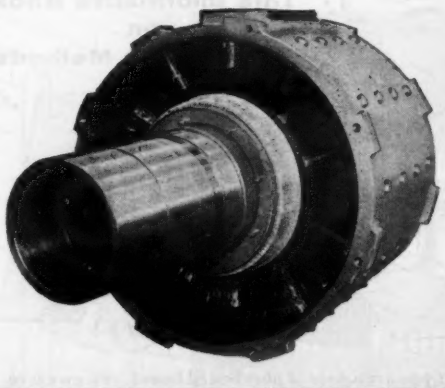


LOW VOLTAGE MOTORS

New General Electric low voltage, high current drive motors pack more power in smaller frame—are job tailored to meet torque and thermal requirements of a wide variety of battery powered traction, conveyor and lift applications. Typical uses: battery powered trucks, electric vehicles of all kinds; motors for hydraulic pumps, conveyors and lifts. *Direct Current Motor & Generator Dept., General Electric Co., Erie, Pa.*

▲ For more details circle **NED-104 A** on enclosed inquiry slip ▲

GENERAL ELECTRIC



CUSTOM TAILORED D-C SPECIALS

Pancake-type motors, built-in motors, direct drives and permanent magnet fields are a few of many new General Electric special direct-current rotating machines being developed for modern applications. Designed for special functions, many of these G-E innovations offer important new opportunities for machinery manufacturers to improve product performance and reduce costs. *Direct Current Motor and Generator Dept., General Electric Co., Erie, Pennsylvania.*

▲ For more details circle **NED-105 A** on enclosed inquiry slip ▲

QUALITY GENERAL ELECTRIC PRODUCTS shown on this page are typical of many d-c specials being developed and built by General Electric to meet industry's dynamic requirements. Within the past 24 months, G.E. has developed ultra-slow-speed motors for gearless direct-drives, underwater propulsion motors and special-purpose contouring drives. Experience gained from these and other developments for more than half a century can be applied to your particular problem quickly and economically. Experienced G-E engineering and manufacturing personnel and modern plant facilities are available to handle—exclusively—the design and manufacture of your non-standard equipment often at a lower cost than standard components with costly modifications.

821-3

If you have a special drive problem, write Specialty D-c Section, Direct Current Motor and Generator Dept., Erie, Pa.

Progress Is Our Most Important Product

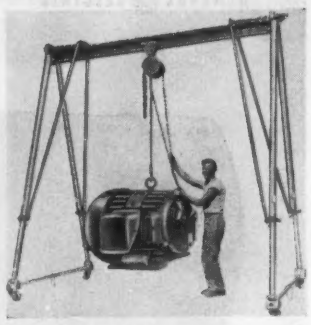
GENERAL ELECTRIC

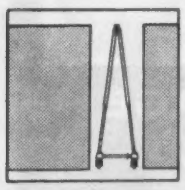
▲ For more details circle **NED-103 A** on enclosed inquiry slip ▲

NEW PORTABLE GANTRY

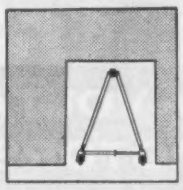
Has Both Height & Width Adjustment

Steel or aluminum alloy I-Beams up to 20′ span, heights to 17′, capacity to 4 tons, leg adjustment up to 6′. Legs fold for hauling or storage. Adjustable tripods and "A" frames also available in many models.

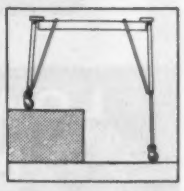




Caster spread adjusts to under 4 feet for rolling in tight spots, or narrow aisles.



Gantry can be set low for moving under piping, fire doors, or overhead machinery.

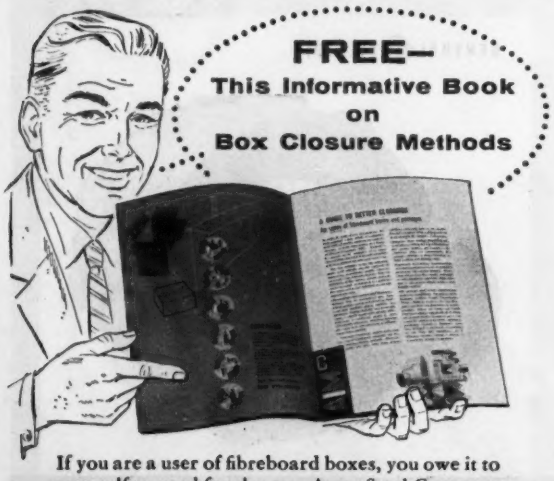


End supports adjust up to 6 feet to rest on platforms, truck beds, or in pits.

Write for Complete Literature

B. E. WALLACE PRODUCTS CORP.
EXTON 19, PA.

▲ For more details circle **NED-106 A** on enclosed inquiry slip ▲



If you are a user of fibreboard boxes, you owe it to yourself to send for the new Acme Steel Company book "A Guide to Better Closures." This information packed 20-page brochure is a guide for the evaluation of methods currently in use to effect economies and stepped-up production in the closure of fibreboard boxes. It contains a collection of reliable information on closure methods presented in non-technical language. Write for "A Guide to Better Closures" today: Dept. NBW-10, Acme Steel Products Division, Acme Steel Company, Chicago 27, Illinois.

ACME STEEL **WIRE STITCHING**

▲ For more details circle **NED-107 A** on enclosed inquiry slip ▲

how to "SKIN" residue glue from a coating tank

apply

RELEASE-COTE

THE MIRACLE RELEASING AGENT

Just a thin film of RELEASE-COTE on tank surfaces and it sheds glues and adhesives instantly at clean-up time.

TRYOUT OFFER!

A generous supply of RELEASE-COTE for you to test. (Note how operators like RELEASE-COTE'S gentleness).

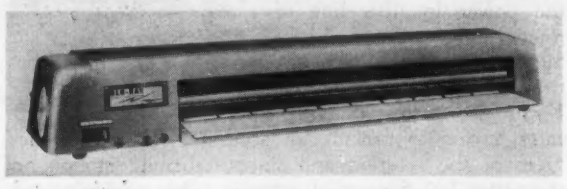
$1.00

Distributed by
POTDEVIN MACHINE CO. 273 North Street Teterboro, N. J.
World's largest producer of coating machines.

▲ For more details circle **NED-108 A** on enclosed inquiry slip ▲

WHITEPRINTER
14, 27, and 42-in. sizes

Inexpensive copies of anything drawn, typed, written, or printed on any type of translucent material are made by the Blu-Ray whiteprinter. Its Pyrex print-

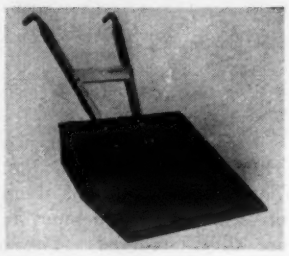


ing cylinder, easily removed for cleaning, provides good transmission of ultraviolet light and cannot be scratched or marked by the pick-off bar. The 14, 27, and 42-in. wide printing capacity models offer controlled printing speeds up to 52 ipm. Prints are developed in seconds in a transparent tube by the aqua-ammonia vapor process. • **Reproduction Engineering Corp.**, Essex, Conn.

▲ For more details circle **NED-109 A** on enclosed inquiry slip ▲

SCOOP TRUCK
handles bulky materials

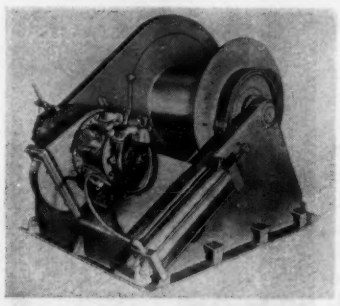
Capacity of about 3 bu enables one man to move quantities of bulky material with this scoop truck. Two 5 x 1½-in. wheels are centered under it to facilitate manipulation. Truck is offered with mold-on rubber, solid rubber, or steel wheels.



• **Lansing Co.**, Box 750, Lansing 3, Mich.

▲ For more details circle **NED-110 A** on enclosed inquiry slip ▲

AIR-POWERED HOIST
lifts 27,000 lb at 37 fpm

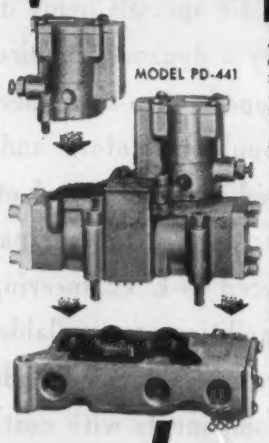


Several throttle and brake systems for the JCP - 120 air-powered hoist make it adaptable for use in mine shafts, car spotting, and as an anchor or spud hoist. Lifting capacities range from 27,000 lb at 37 fpm to 3700 lb at 220 fpm. A five-cylinder radial air motor of 10, 17, or 23 hp and an integral gear case drive the rope drum through a multiple roller chain. Drum capacity is 2300 ft of ¾-in. wire rope. Entire assembly is mounted on a skid type base. Hoist is also offered with a 10 to 25-hp electric motor drive or air-cooled gasoline or diesel engine drive. • **Joy Mfg. Co.**, Oliver Bldg., Pittsburgh 22, Pa.

▲ For more details circle **NED-111 A** on enclosed inquiry slip ▲

Valvair®

½" NPT PLUG-IN VALVES



4-way single or double pilot-operated types, for sub-base or manifold mounting. Aluminum and stainless steel components assure multi-million cycle dependability . . . short-stroke design speeds response. Interchangeable pilots, with coils guaranteed against burn-out for life of valve, fit any plug-in Speed King. Separate coded (4-wire) circuits on double solenoid models. Coils for ac or dc, any voltage . . . 35 — 200 psi range . . . integral junction box . . . optional manual over-ride, common or separate exhaust ports, sub-base connected external pilot supply . . . ¾ in. exhaust port, ½ or ¾ in. inlet and cylinder ports . . . flow area through valve and sub-base equals full ½ in. pipe . . . valve meets JIC standards.

For more information, write for Bulletin SPi. Address Dept. NED-160, Valvair Corp., Akron 11, Ohio.

Valvair AKRON 11, OHIO

DIVISION OF INTERNATIONAL BASIC ECONOMY CORPORATION (IBEC)

Other INDUSTRIAL DIVISIONS of IBEC: The Sinclair-Collins Valve Co. The Bellows Co., Akron, Ohio • V. D. Anderson Co., Cleveland, Ohio.

8100

▲ For more details circle **NED-112 A** on enclosed inquiry slip ▲

TALK-A-PHONE
INTERCOMMUNICATION
The Accepted Symbol of Quality and Dependability

Only the New TALK-A-PHONE has these exclusive features!

- **DYNASONIC SELECTOR.** Select station performance, intermix or change as needed.
- **MULTI-MAGIC STATION SELECTOR.** Up to 50-station capacity in same attractive cabinet.
- **"PRIVATE" or "NON-PRIVATE" MASTERS and STAFFS.** Converse in privacy, answer calls from a distance.
- **NOISE-FREE, VOICE-RANGE POWER.** Rugged, All-Transistor, high-gain amplifier provides exceptional clarity and naturalness of tone.

PLUS . . . Incoming Call Chime; Busy Signal; Monitoring Signal; External Relay Control; Reciprocal Power Supply . . . all as standard features of the New TALK-A-PHONE

Proportioned like a book, only 3-inches high. The look and feel of fine-grained leather, with the strength and rigidity of steel. In charcoal gray and brushed chrome.

A.I.A. File Number 31-i-51

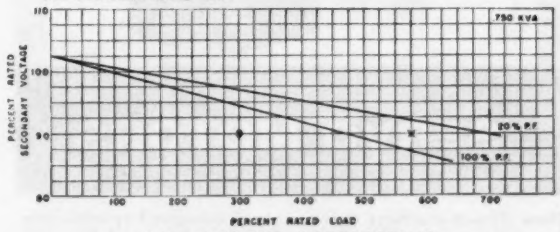
Write for free brochure and name of nearest distributor

TALK-A-PHONE CO.
Dept. NE-1, 5013 N. Kedzie Ave., Chicago 25, Illinois

▲ For more details circle **NED-113 A** on enclosed inquiry slip ▲

is this the kind of performance you want in a MACHINE TOOL CONTROL TRANSFORMER

This line of Acme Electric machine tool transformers has ability to handle momentary high overloads far beyond their normal rated capacity. Because of this inherent overload capacity when needed, it is often possible to use a smaller size Acme Electric control transformer than the usual conventional types. This typical regulation curve is proof of performance. Write for Bulletin MTC 307.



ACME ELECTRIC CORPORATION
301 Water St. Cuba, N.Y.

Acme ACME Electric
TRANSFORMERS

▲ For more details circle **NED-114 A** on enclosed inquiry slip ▲

brazing washers
Edgewound
FROM WIRE STOCK

No die charges
No blanking scrap losses

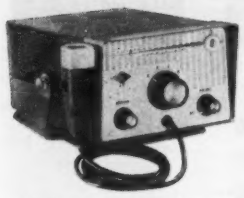
- No lead time needed for dies or exact strip.
- Use with induction, gas-air, furnace, or other heating methods.
- Available in EASY FLO and SILFOS — Copper, Bronze, and other alloys.
- Diameters up to 4" I.D., wire thicknesses from .010 upward.

Write for 16 page booklet on better brazing.
See our Catalog in Sweets Product Design File 7/Lu.

LUCAS-MILHAUPT *Engineering Co.*
5070 South Lake Drive Cudahy, Wisconsin

▲ For more details circle **NED-115 A** on enclosed inquiry slip ▲

New!... Low Cost 2-Way Radio



MULTI-CHANNEL G-12 Citizens Communicator

A complete 4-channel radio station for virtually unlimited use in car... truck... office... boat... plane. Easy, non-technical operation!

Operates on new 11-meter Citizens Band. Easy to obtain station license... merely fill out FCC form, no exam required.

Full-featured! No tuning... has crystal-controlled channels for highest stability, reliability. Easy, press-to-talk operation. Has noise limiter, adjustable "squelch", and transmitter tune indicator. Fully FCC type accepted.

Rugged, dependable, compact. Only 4½" H, 7" W, by 10" D. Weighs but 11 lbs. Has gimbal mount, 12VDC/117VAC universal power supply for fixed or mobile service. Price includes microphone and crystals for one channel.

149.95 PER UNIT

Write today for free brochure and booklet, "11 meter Citizens Band Radio"

GONSET
Division of Young Spring & Wire Corporation
Dept. N 801 SOUTH MAIN ST., BURBANK, CALIFORNIA

▲ For more details circle NED-116 A on enclosed inquiry slip ▲

Eastern PORTABLE MIXERS

especially designed for small batch processes

. . . offer precise mixing results with long-term cost savings

Eastern Portable Mixers give dependable, low-cost service in small batch processes. Where fixed mounted installations are not required, Eastern's Portables offer greater versatility, ease of handling, and long-term savings.

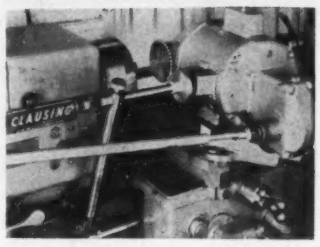
Speeds of 420, 1125, and 1725 R.P.M. rated from 1/20 to 3 H.P. are standard. Motors in all standard types can be supplied in open drip-proof, totally-enclosed, or explosion-proof construction.

Write for new Portable Mixer Bulletin 530-N.

EASTERN INDUSTRIES, INC.
MIXER DIVISION • NORWALK, CONN.

▲ For more details circle NED-117 A on enclosed inquiry slip ▲

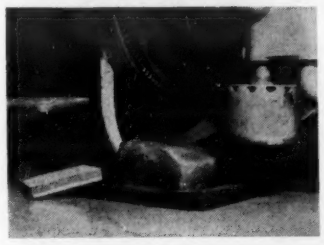
THREAD MILLER attaches to 9 to 20-in. lathes



Brittle plastics, beryllium, stainless steel, and titanium are among the many metals and other materials which can be threaded to close tolerances by the Lathe-Thread-Miller. It atttaches to 9 to 20-in. screw cutting engine lathes. The portable unit makes special taps and dies used in machine and instrument shops, laboratories, toolrooms, and in mobile equipment. Operating range is 4 to 200 threads per inch. It cuts multiple, 60-degree Acme, and square threads. • **Fen-Thread Machine Co.**, 3107 N. Broad St., Philadelphia 34, Pa.

▲ For more details circle NED-119 A on enclosed inquiry slip ▲

FELT VIBRATION ABSORBERS for mounting various machines



Up to 85 per cent of noise and transmitted vibration of various machines is reduced when mounted on Red-White-N-Blue Vibra-Sorb felt pads. Made in ½ and 1-in. thicknesses, pads are cemented both to floor and machine base with adhesive, eliminating the need for lag-bolts or other permanent mountings. Adhesive is readily dissolved if equipment must be moved. Pads are resistant to oil, water, and most solvents, and will support loads of 10 to 50 psi. Several layers can be used for heavier loads. Material is available cut to size or in 5-ft wide 50-ft rolls at an average cost of 4 cents per square inch. • **Mike Krasilousky Trucking & Millwright Co.**, 426 Lafayette Ave., Brooklyn 38, N. Y.

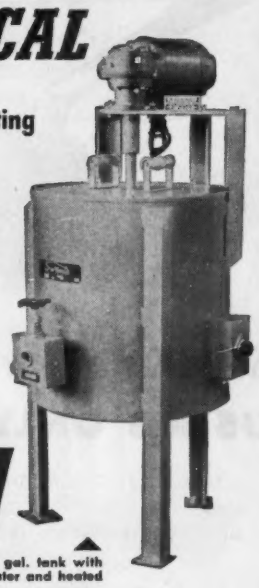
▲ For more details circle NED-120 A on enclosed inquiry slip ▲

LITERATURE RACK holds 18 letter size pieces

Three horizontal pockets on each side of the A18U Double Face Rack will display 18 different letter size literature pieces or magazines. The all-aluminum rack has hammered, bronzed, baked enamel finish with polished aluminum trim. Over-all dimensions are 53 x 27½ in. • **Simplicity Tool Co.**, 2850 N. Mississippi Ave., Portland 8, Oreg.

▲ For more details circle NED-121 A on enclosed inquiry slip ▲

Sta-Warm ELECTRICALLY HEATED CYLINDRICAL TANKS for melting and dipping compounds



Numerous capacities. Range of voltages. Variety of useful accessories. All engineered to fit your production requirements. Every Sta-Warm melting tank is built to efficiently and economically supply its full rated production of properly melted compounds.

Write FOR DESCRIPTIVE BULLETIN TODAY

Popular 15 gal. tank with power agitator and heated gate valve.

Sta-Warm ELECTRIC CO.
130 N. CHESTNUT ST., RAVENNA, OHIO
Subsidiary of ABRASIVE & METAL PRODUCTS CO.

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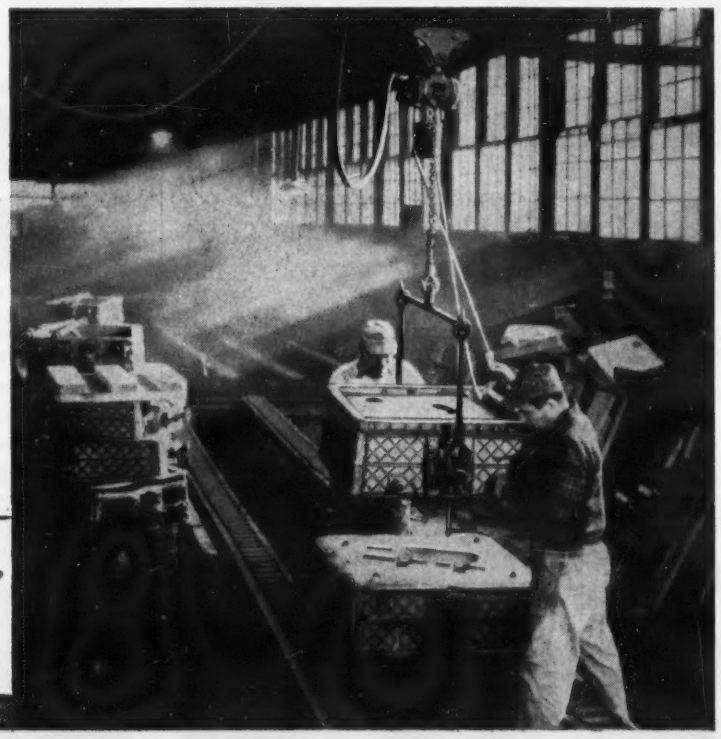
Yale air hoists

have proved themselves ideal in every type of tough operation. They are especially safe for overhead handling in hazardous atmospheres. The Air motor is explosion proof and cannot overheat. These light, compact hoists have constant speed control for smooth lift in either hook or trolley models. Capacities, ½ and 1 ton. Choice of roller or link chain, pendant or pull-cable control.

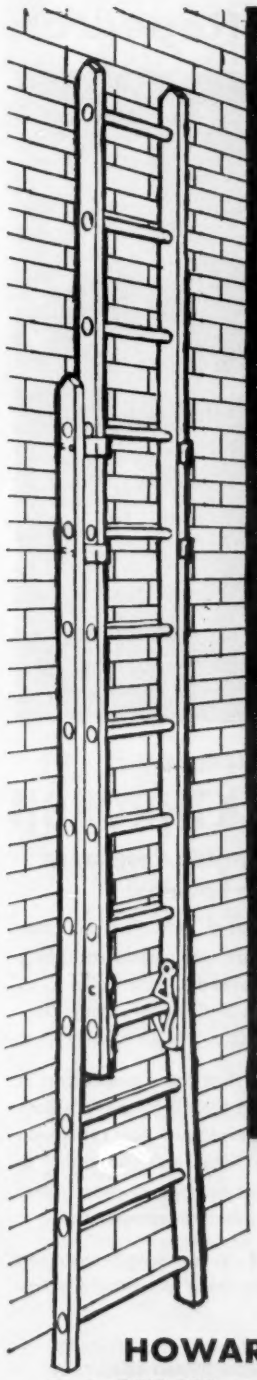


Contact your Yale distributor listed under "Hoists" in the Yellow Pages of your phone directory. Or write for brochure #5145A to The Yale & Towne Manufacturing Co., Yale Materials Handling Div., Dept. AH-5, Phila., 15, Pa.

YALE®
INDUSTRIAL LIFT TRUCKS
TRACTOR SHOVELS • HOISTS
YALE & TOWNE

Yale Materials Handling Division, a division of The Yale & Towne Manufacturing Co. Manufacturing Plants: Philadelphia, Pa., San Leandro, Calif., Forrest City, Ark. Products: Gasoline, Electric, Diesel, LP-Gas Industrial Lift Trucks • Worksavers • Warehousers • Hand Trucks • Industrial Tractor Shovels • Hand, Air, Electric Hoists

▲ For more details circle NED-118 A on enclosed inquiry slip ▲



NEW! NEW! NEW!

RICH VICTOR EXTENSION LADDER

A new concept in ladder design

JOB TESTED AND PROVED!

Here is an extension ladder that has received wide acceptance by utilities - industry - painters - builders - wherever extension ladders are used. These features are found ONLY in the Rich Victor Extension Ladder

- Wood rails
- Aluminum Rungs
- Wood parts Preservative Treated Before Assembly
- Will not conduct electricity
- Weighs less than 2 pounds per foot

The only extension ladder of its kind.

Step-Up and get Rich on the entire Rich ladder line.

WRITE FOR COMPLETE CATALOG

HOWARD B. RICH, INC.
P. O. BOX 120 • CARROLLTON, KENTUCKY
The Nation's Leading Ladder Manufacturer

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Adjustable to various strap widths

Strap Faster, More Efficiently...

USING ONLY ONE TOOL!

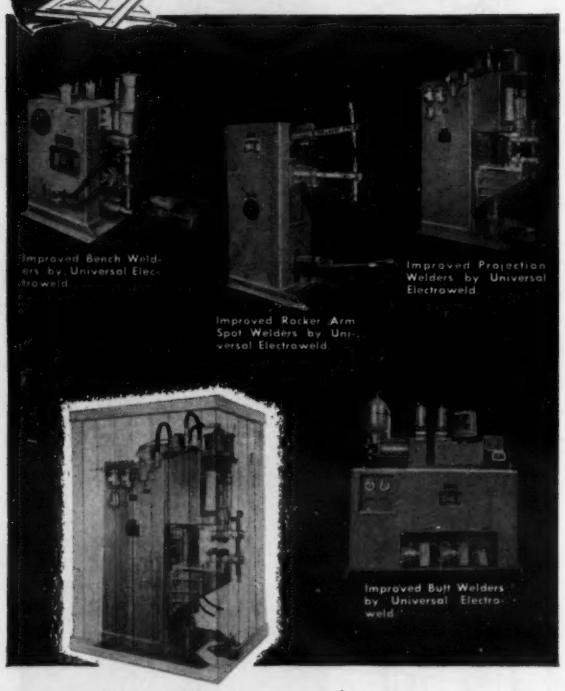
New A. J. Gerrard Stretcher-Sealer combines three strapping operations .... tensioning, sealing, scoring for easy fast break-off. Speeds up production, reduces operator fatigue, eliminates strap waste. For complete specifications, circle reader service card or write:

A.J. GERRARD & COMPANY / STRAPPING MATERIALS

1954 Hawthorne Boulevard • MELROSE PARK, ILLINOIS

▲ For more details circle NED-124 A on enclosed inquiry slip ▲

Profit through E.A.I. Research



in ready-to-use packages... a

WELDING BREAKTHROUGH

• More Versatile and Durable Resistance Welders at Major Savings!

Welders made for a quarter-century of high production without major repairs . . . rams that never need replacing . . . Lineal Ball Bearing sleeves instead of cam rollers . . . *Heat-Vector®* control that brings 3-phase welding performance to single phase welders . . .

These are some of the advances that come packaged in today's new Universal Electroweld Single Phase Welders . . . the most practical ever developed for resistance welding. They bring new flexibility and precision to resistance welding . . . with major savings on your initial investment . . . reduce installation, maintenance costs.

RENTAL AGAINST PURCHASE . . . an easy way to see for yourself how you can gain by using Universal Electroweld Resistance Welders.

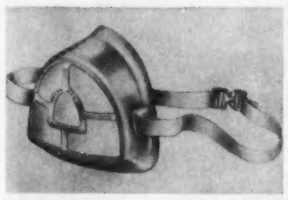
Write for brochure, "NEW PACKAGED WELDING ADVANTAGES."

DEMAND THE BRAND MADE BY PEOPLE WHO BUY YOUR PRODUCTS

UNIVERSAL ELECTROWELD DIVISION
Electric Arc, inc.
152-8 Jelliff Ave.
Newark 8, New Jersey
ELECTRIK-ARC

▲ For more details circle NED-125 A on enclosed inquiry slip ▲

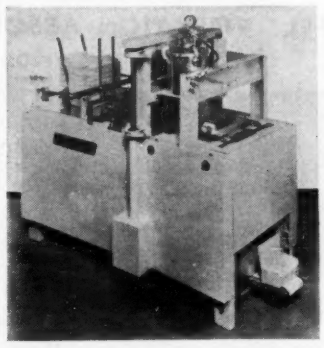
LIGHTWEIGHT DUST MASK
for dust and paint spray use



Protection during intermittent nontoxic paint spraying operations as well as against nuisance dusts is provided by this lightweight polyethylene safety mask. Consisting of filter, inner and outer frames, and headband, it weighs less than 1 oz. Reusable filter can be washed or dry cleaned and is unaffected by water, soap, detergents, oils, or perspiration. • Welsh Mfg. Co., 12 Magnolia St., Providence 9, R. I.

▲ For more details circle NED-126 A on enclosed inquiry slip ▲

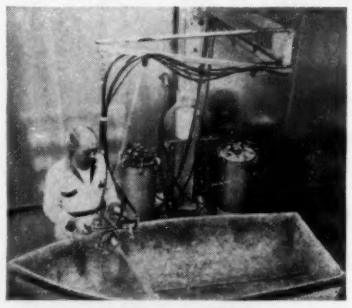
TRAY & CARTON FORMER
makes up to 70 packages per minute



Low cost blanks are converted into shaped trays and cartons by the Model PG packaging machine. It handles blanks from 5 to 22 in. long by 3½ to 16 in. wide, automatically feeding them from a magazine for forming at speeds up to 70 per minute. A uniform glue pattern is applied to end flaps. Finished cartons or trays are delivered on a moving conveyor, ready for filling. • Peters Machinery Co., 4700 Ravenswood Ave., Chicago 40, Ill.

▲ For more details circle NED-127 A on enclosed inquiry slip ▲

RESIN SPRAYING OUTFITS
for making large plastic shapes



A counterbalanced Rand gun which sprays a self-curing resin mixture directly on the form is incorporated in each of three Rex outfits for making large glass fiber-reinforced plastic shapes, such as boats, vehicle bodies, tanks, and housings. Sprayup method eliminates need for matching dies, mats, and press equipment. Systems comprise two mobile and one stationary style, all of which are equipped with swinging booms to widen work area. Outfits are supplied with tanks, hoses, gages, and such accessories as scales, paint spray guns, and measuring and mixing devices. • Rex Metal Parts Co., 1295 W. 78th St., Cleveland 2, Ohio.

▲ For more details circle NED-128 A on enclosed inquiry slip ▲

WHEREVER SOMETHING **STICKS** You'll Find A Use For

IMS **SILICONE FLUID SPRAY**

ON FILM SEALERS, CRIMPER JAWS, EMBOSSING ROLLS, PANS; STAMPING, FORMING DIES—MOLDS OF ALL KINDS

SIMPLY SPRAY ON THIS PURE SILICONE FLUID COATING
And your sticking problems are over!

The most economical way to apply costly Silicone Release Agents!

SAFE — NON-TOXIC
CLEAN — LONG LASTING

Handy Self Dispensing Can

Has No-Fumble, Speedy Spray Head

PRICES (Delivered)
Sample Can..... $2.00
Per Unbroken Dozen..... $18.00
Per Unbroken Gross.... $197.40

INJECTION MOLDERS SUPPLY CO.
3514 LEE RD. CLEVELAND 20, O.

▲ For more details circle NED-129 A on enclosed inquiry slip ▲

Get the Latest Data on **DARNELL** CASTERS & WHEELS

wherever the need.. whatever the size...

If you want maximum floor protection, economy and efficiency Demand Darnell Dependability...

YOUR DISTRIBUTOR CAN HELP YOU — CALL HIM

SEND FOR YOUR FREE COPY

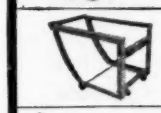
DARNELL CORPORATION, LTD.
DOWNEY • (LOS ANGELES COUNTY) CALIFORNIA
37-28 SIXTY-FIRST ST., WOODSIDE 77, L. I., N. Y.
36 NORTH CLINTON STREET, CHICAGO 6, ILLINOIS

Look in the YELLOW PAGES

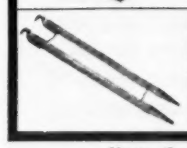
▲ For more details circle NED-130 A on enclosed inquiry slip ▲

NOW, FASTER SAFER HANDLING
of your Barrels and Drums

Fairbanks Fig. 9090 Barrel Truck
Specifically designed for safer handling of barrels and drums of any height. Barrels and drums loaded and unloaded without ever being touched by the operator. Load balanced over and ahead of wheels to reduce operator's burden and improve maneuverability. Narrow all steel pipe frame — welded assembly.



Fairbanks Fig. 51 Barrel Stand
Permits one man to safely rock full drum into drain position, then provides mobility and convenience for handling, storing and draining steel drums.



Fairbanks Type 228 Barrel Skids
For sliding barrels, drums, kegs or cases from one level to another. Eliminates danger of dropping. Very handy for unloading and loading railroad cars and motor trucks. Available in 7, 8, 10 and 12 foot lengths.

Yours On Request: Truck Catalog, complete with details and specifications on Fairbanks two-wheel and platform trucks. Fully illustrated. Without obligation, write for your free copy today.

THE **FAIRBANKS** COMPANY
393 Lafayette Street, New York 3, New York
Branches: New York 3 • Boston 10 • Pittsburgh 22 • Rome, Georgia
Casters • Wheels • Trucks • Valves • Dart & "Pic" Unions

▲ For more details circle NED-131 A on enclosed inquiry slip ▲

His real name is "SERVIS RECORDER"— an instrument that keeps track of what machines or lift trucks are doing 24 hours a day. Every stop and every start are permanently recorded. You get an exact record of total productive time and nonproductive time of any machine. Now you can pinpoint inefficiency quickly — and the cost is peanuts!

Mechanical Models attach to machine. Electrical Models may be placed in plant office.

Write for folder.

THE SERVICE RECORDER COMPANY
1013A ROCKWELL AVE. • CLEVELAND 14, OHIO

▲ For more details circle NED-132 A on enclosed inquiry slip ▲

GANTRY CRANES SAVE TIME

Cost Fraction of Heavy Overhead Crane

If your overhead crane is loaded with work, consider the addition of single-leg gantry cranes to work under it. You can free it of much of the lighter work and eliminate costly waiting time of skilled workers. Several gantries can be purchased for the price of a single heavy overhead traveling crane. Supplied for hand or electric operation.

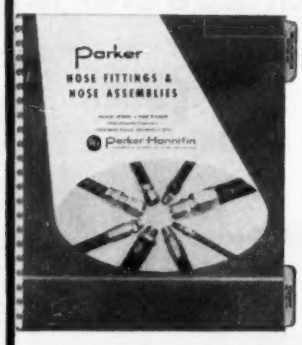
GET THIS BOOK!
BOOKLET No. 2008
Packed with valuable information . . . Profusely illustrated.

CLEVELAND TRAMRAIL DIVISION
THE CLEVELAND CRANE & ENGINEERING CO.
6622 E. 285th St., Wickliffe, Ohio

CLEVELAND TRAMRAIL

▲ For more details circle NED-133 A on enclosed inquiry slip ▲

Hose and hose fittings are easy to select from this 72-page Parker Catalog



It's easy to choose the best Parker Hose and Parker Hose Fittings to handle practically any gas from air to freon, practically any liquid from water to synthetic hydraulic fluids from the data, specs, and recommendations in the complete Parker Hose Fittings and Hose Catalog 4400. Also includes useful information on assembling both standard and Parker "no-skive" Hoze-Lok Fittings to 15 types of Parker Hose.

Your Parker Hose Fittings and Hose distributor, listed in the Yellow Pages, can furnish you a copy. Or write . . .

Parker FITTINGS AND HOSE DIVISION
17325 Euclid Avenue • Cleveland 12, Ohio
A DIVISION OF PARKER-HANNIFIN CORPORATION

▲ For more details circle NED-134 A on enclosed inquiry slip ▲

Smaller Panels
WITH SQUARE D "System-Designed" RELAYS

These 2 units are the basis for a complete system of relays

Write for Bulletin D.
Square D Company,
4041 N. Richards Street,
Milwaukee 12,
Wisconsin

SQUARE D COMPANY
wherever electricity is distributed and controlled

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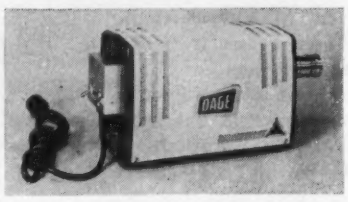
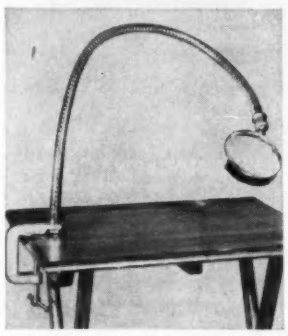
TELEVISION CAMERA
for closed-circuit industrial use



Transistorized video amplifier incorporated in the Model 70-A closed-circuit television camera eliminates microphonics and provides 600-line resolution. Designed for heavy duty industrial and general use, it has electronic circuits which automatically and instantaneously make adjustments to light level variations. On-chassis controls regulate horizontal and vertical size, linearity, and centering. The self-contained unit requires 45 w of 115 v, 60-cycle power. Size is 11 13/16 x 5 15/16 x 7⅝ in. Price is under $1400. • **Thompson Ramo Wooldridge, Inc.,** Dage Television Div., Michigan City, Ind.

▲ For more details circle NED-136 A on enclosed inquiry slip ▲

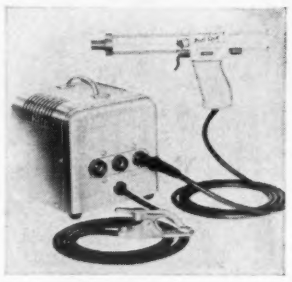
INSPECTION MAGNIFIER
3-in. lens on 24-in. gooseneck



An adjustable clamp on this inspection and assembly magnifier permits easy fastening to workbenches, machines, and tables. Its 3-in. diameter lens is mounted on a 24-in. long flexible gooseneck which bends to any position. Typical uses are inspection of small parts, fabrication of micro-assemblies, and examination of work in process. • **Edmund Scientific Co.,** 180 E. Gloucester Pike, Barrington, N. J.

▲ For more details circle NED-137 A on enclosed inquiry slip ▲

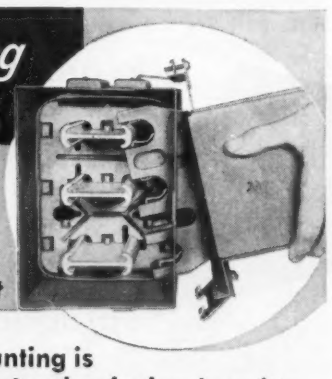
SPOT WELDING GUN
offers controlled penetration



Used in combination with the Redi-Spot arc voltage reducer, the Redi-Spot welding gun operates on all light-gage mild steels without cleaning or special preparation. It provides semiautomatic controlled penetration and one-man operation from one side of the material. Unskilled operators can use it without previous welding experience. Feed-Lock mechanism in the gun controls the electrode burn-off, automatically cutting off the arc when proper penetration and metal deposit have been made. • **Marquette Mfg. Co.,** 307 E. Hennepin Ave., Minneapolis 14, Minn.

▲ For more details circle NED-138 A on enclosed inquiry slip ▲

hook-swing MOUNTING
–Another reason for using Square D Aluminum Plug-in Duct



Hook-swing mounting is easier and safer. Just hook plug-in unit to top of duct, then swing down into position

Hanger mounts in any position for easier installation.
I-beam construction of bus bars is four times stronger than other types.
Full-width bus support gives extra strength, and less vibration.
Totally enclosed construction prevents accidental shorts.
Insulator on plug-in jaws guides units into position, protects jaws from damage.
Steel pins in each bus bar prevent shifting, provide vertical support.

Write for Bulletin SD-110 • Square D Company, 1601 Mercer Road, Lexington, Kentucky

SQUARE D COMPANY
wherever electricity is distributed and controlled

▲ For more details circle NED-139 A on enclosed inquiry slip ▲

2739

THE HAMILTON TOOL COMPANY
901 HANOVER STREET • HAMILTON • OHIO

▲ For more details circle NED-140 A on enclosed inquiry slip ▲

ANNOUNCING NEW HIGH PRODUCTION END FINISHER

New Model 660 Speeds Chamfering • Deburring • Facing • Drilling • Reaming • Tube-End Spinning

- Rugged new design for high production, easy operation, faster feeds on simultaneous inside-outside deburring, chamfering, facing.
- New rigid, unitized spindle frame and heavier base retains close concentricity between the tool holder and chuck jaws.
- Simplified setup, operation, maintenance . . . one-minute speed changes with new hinged safety guard and pivoted motor mount.
- Production to 800 ends an hour . . . capacity to 2" O.D. . . . air operation, larger units or special machines are also available.

Write for catalog giving cost cutting features, production data, complete specifications.

PINES ENGINEERING CO., INC.
Specialists in Tube Fabricating Machinery
641 WALNUT • AURORA, ILLINOIS

▲ For more details circle NED-141 A on enclosed inquiry slip ▲

NEW! • LOW COST EC&M MAGNETIC CONTROL FOR DC CRANES

Better than Manual Control for So Many Reasons—

Now, on any DC application up to 55 HP, 230 volts, new "PT" crane control gives you the advantages of full magnetic control where manual control formerly was specified purely on the basis of price.

Write for Bulletin 6131.
The Electric Controller & Mfg. Co., Division of Square D Company, 4500 Lee Road, Cleveland 28, Ohio

"PT" Controller with front cover removed

SQUARE D COMPANY
EC&M DIVISION • CLEVELAND 28, OHIO
wherever electricity is distributed and controlled 2725

▲ For more details circle NED-142 A on enclosed inquiry slip ▲

COMMANDER TAPPERS

a Type and Size for Every Job!

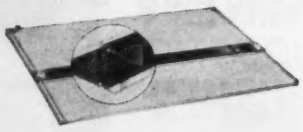
Commander Tappers are made in 10 models—each designed to handle tapping jobs over a wide range. From the Commander Tapper line, you can select the right unit to give you the exact performance your job requires. Whichever Commander Tapper you select, you will get unequalled performance and tapping economy. Sold and serviced by drilling and tapping specialists. Write for the Commander Production Tool Catalog and name of nearest Distributor.

101

Commander MFG. CO.
4220 WEST KINZIE STREET • CHICAGO 24, ILLINOIS

▲ For more details circle **NED-143 A** on enclosed inquiry slip ▲

MAYLINE

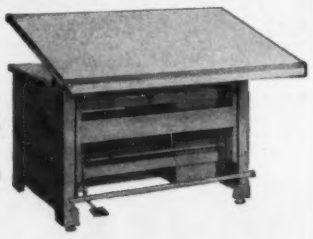


The Best Possible Combination

A Mayline straightedge and a Mayline table. Mayline straightedges are made from moisture resistant black satin laminated phenolic plastic. Transparent edges are crystal clear. Available in 30" to 96" lengths. Straightedges completely described in Folder S-15.

These fine straightedges attached to the May-O-Matic table make an incomparable combination. The May-O-Matic top is adjustable for height positioning and required angle of drawing position. It is available in 10 combinations. This amazing table explained in detail in Folder S-22. Send for both folders today.

MAYLINE CO.
617 No. Commerce St.
Sheboygan, Wisconsin



MAYLINE

▲ For more details circle **NED-144 A** on enclosed inquiry slip ▲

DO U BEND U BENDS?

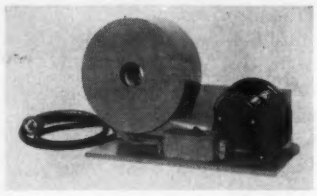
Whether you bend "U" bends or other type bends from pipe, tubing, bus bar or structural metal, you'll bend it better, faster, more economically with Pedrick Production Benders.
PEDRICK TOOL AND MACHINE CO.
3640 N. Lawrence St., Phila. 40, Pa., Dept. 6.

"Why don't you send for the NEW PEDRICK LINE BULLETIN. Do it now."

BEND WITH PEDRICK

▲ For more details circle **NED-145 A** on enclosed inquiry slip ▲

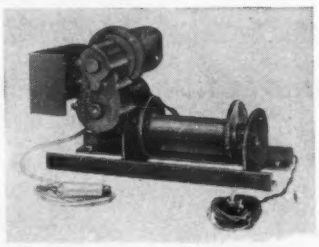
MAGNETIC TAPE ERASER
demagnetizes tape in its container



The MTE-2 Magnetic Tape Eraser will demagnetize either Direct or FM recorded tapes without removing them from their containers. It will handle any magnetic tape that can be rolled to diameter of 1½ in. Unit has forced draft cooling and requires 18.5 amp at 117 v ac. It weighs 26 lb and lists for $195. • **Southwestern Industrial Electronics Co.**, 10201 Westheimer, Houston 19, Tex.

▲ For more details circle **NED-146 A** on enclosed inquiry slip ▲

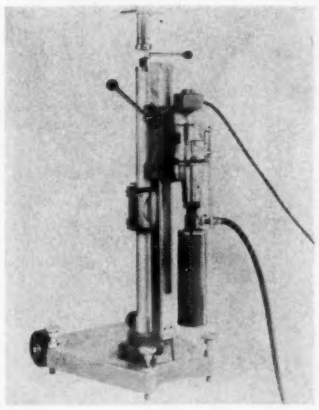
ELECTRIC WINCH & HOIST
portable unit lifts 1500 lb



Variety of pulling or lifting jobs on loads up to 1500 lb can be handled by this 57-lb My-Te portable electric winch and hoist. It operates from any 30-amp 110-v ac circuit and is suitable for small elevator or painter's scaffold operation. Lift capacity is 750 lb on a single line and 1500 lb on a double line. Drum holds 150 ft of ¼-in. cable and is driven at speed of 59 rpm. Unit has 15 ft of lead cable and a 10-ft remote control cable with forward and reverse action. It lists for $280. • **City Engineering Co.**, 3547 Massachusetts Ave., Indianapolis 18, Ind.

▲ For more details circle **NED-147 A** on enclosed inquiry slip ▲

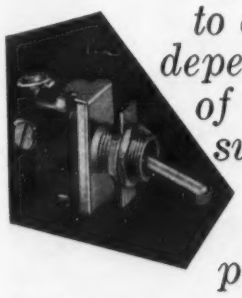
MASONRY DRILLING MACHINE
cuts holes up to 6¼ in. diameter

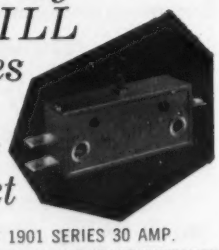


Diamond core bits used by Model 600 Roto-Kor masonry drilling machine will cut clean holes up to 6¼ in. diameter through reinforced concrete or other masonry materials at speeds of 1 to 2 in. per minute. Swivel allows drilling at any angle. Swivel head and drill can be mounted on standard pipe to fit any drilling job. Drill is powered by universal type, heavy-duty 115-v 25-50-60 cycle motor and is provided with ceiling jack and extensions for vertical bracing. • **KOR-IT Co.**, 991 Richard Ave., Santa Clara, Calif.

▲ For more details circle **NED-148 A** on enclosed inquiry slip ▲

It costs no more to add the dependability of McGILL switches to your product





NO. 90 TOGGLE SWITCH
McGill recognized reliability and long life is available in the No. 90, 15 amp. toggle switch that easily carries full load in excess of 300,000 operations. ¾ HP, SPST and SPDT no off or center off. Full line from 6 amps. with DC and HP ratings. Choice of terminals.

NEW 1901 SERIES 30 AMP. MOMENTARY CONTACT SWITCHES
Designed especially to apply extra performance and life advantages where 30 amps., in small size, can simplify assembly and eliminate auxiliary components. Solid copper contacts inlaid with silver cadmium oxide. Spring controlled mechanism eliminates contact bounce. SPST NO or NC, SPDT and SPST 2 ckt. Choice of actuators. 1.876" x .812" x .500".

SPECIAL SWITCHES engineered to your specific requirements

Write for Catalog No. 84.

engineered electrical products
McGILL
precision needle roller bearings

McGILL MFG. CO. INC., Electrical Div., 151 N. Campbell St., Valparaiso, Ind.

▲ For more details circle **NED-149 A** on enclosed inquiry slip ▲

A NEW IDEA IN PREPARATION SCREENS

Designed to eliminate blinding when screening large amounts of near-opening size materials

THE WEDGE-WIRE
*TAPER-SLOT
patent applied for

*From loop to loop, the opening or slot gradually increases in width. This new design enables materials that would normally lodge between the wires to be transported, with the flow of the mass, to the larger opening of the taper slot. At this point the material either passes through the screen or becomes loose. In addition, the "dip" created by Wedge-Wire loop construction, frees oversize materials and allows them to continue on with the material flow. These factors are responsible for the high efficiency of the TAPER-SLOT screen.

*for example: .016 opening tapered to .024 — the combination of opening sizes would be the same between each loop throughout the entire screen.

The new TAPER-SLOT can be easily interchanged with other types of Wedge-Wire Kleenslot screens. Available in all Wedge-Wire materials.

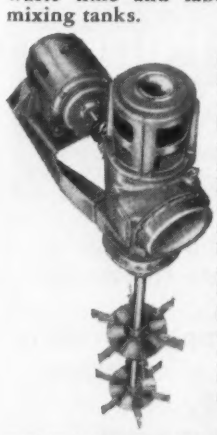
for additional information . . . write
WEDGE-WIRE CORPORATION
Wellington, Ohio

▲ For more details circle **NED-150 A** on enclosed inquiry slip ▲

Save money... mix fluids without special tanks

Make any open container a mixing vessel . . . with a LIGHTNIN Portable Mixer

Take this short cut to more profitable production! Don't waste time and labor transferring fluids to special mixing tanks.



Power-mix them right where they are—in can, drum, pail, or kettle—with a LIGHTNIN Portable Mixer.

Fast, thorough. Just clamp the right size LIGHTNIN in place and flip a switch. Stir paint, chemicals, glaze. Dissolve fine powders, mix heavy slurries. Keep products from burning while heating. Powerful LIGHTNIN propeller stream *tumbles* and *rotates* the batch for complete uniformity, usually in a few seconds.

No risk. Your mixing results are unconditionally guaranteed when you mix with LIGHTNINS. Thousands are in use, many 25 years and more.

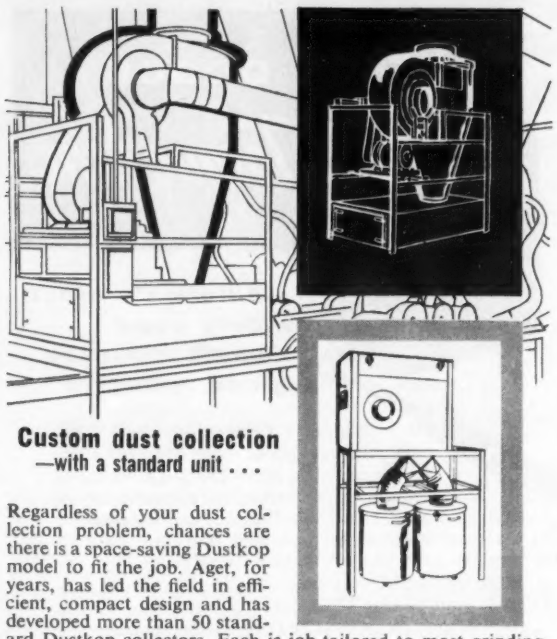
Thirty portable models to choose from. All have ball-bearing motor; quickly removable true-running shaft; instant locking in any position. Sizes ⅛ to 3 HP. For full details, request 28-page illustrated Catalog B-108.

HOW BIG is the mixing job? There's a LIGHTNIN to handle it! Permanent-mounting models for open or closed tanks up to 6 million gallons. Sizes ¼ to 500 HP. Send for descriptive Catalog B-109.

Lightnin® Mixers
MIXCO fluid mixing specialists

MIXING EQUIPMENT Co., Inc., 165-a Mt. Read Blvd., Rochester 3, N. Y.
In Canada: Greey Mixing Equipment, Ltd., 100 Miranda Ave., Toronto 19, Ont.

▲ For more details circle **NED-151 A** on enclosed inquiry slip ▲



Custom dust collection
—with a standard unit . . .

Regardless of your dust collection problem, chances are there is a space-saving Dustkop model to fit the job. Aget, for years, has led the field in efficient, compact design and has developed more than 50 standard Dustkop collectors. Each is job-tailored to most grinding, buffing or finishing operations—as well as many other types of service. Write for illustrated brochure that helps select your tailored Dustkop unit.

Also a complete line of mist collectors

AGET MANUFACTURING COMPANY 1396 EAST CHURCH ST., ADRIAN, MICHIGAN DUSTKOP Stops Dust

▲ For more details circle NED-152 A on enclosed inquiry slip ▲

NEW!
MANHEIM VARIABLE SPEED BELT

Now Outdates Wood Block and Variable Speed V-Belts

MVS Belt replaces enclosed drive belts without disassembly. Its patented design sets a new standard in V-to-V drives because it is adjustable and is installed in minutes instead of hours. Uniform thickness and width guarantee constant power delivery with no cross-sectional distortion. Available in 26 widths from 1½" thru 5".

Write Today For Complete Information

MVS **MANHEIM** MANUFACTURING & BELTING COMPANY Manheim 4, Penna.

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▲ For more details circle NED-153 A on enclosed inquiry slip ▲

They both know the best buy in tape . . .

ACCURATE TAPES
FRICTION . . . . RUBBER . . . . PLASTIC

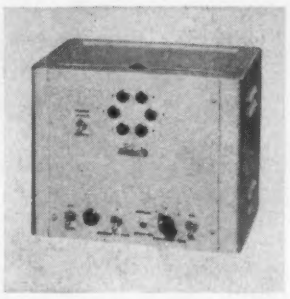
- ✓ non-raveling
- ✓ straight tearing
- ✓ high tensile strength
- ✓ strong adhesion
- ✓ highly insulating

Send today for our most recent describing details.

ACCURATE MFG. COMPANY
Garfield, New Jersey

▲ For more details circle NED-154 A on enclosed inquiry slip ▲

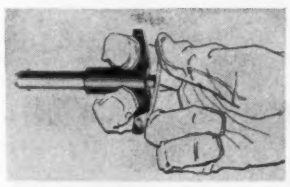
VIBRATION MONITOR
senses vibration in machinery



Vibration levels in machinery and motors are sensed by Model KC-524 Vibration Monitor which automatically shuts down the machine or sounds an alarm if vibrations are excessive. Monitor consists of scanning unit which accommodates up to 10 vibration pickups and a trigger unit which amplifies the vibration signals and feeds them to a trigger circuit and a fail-safe circuit. Stations are monitored in sequence for a preset time interval. Electronic or pickup failure also causes shutdown or alarm. • **Kahn & Co.**, Box 516, Hartford 1, Conn.

▲ For more details circle NED-155 A on enclosed inquiry slip ▲

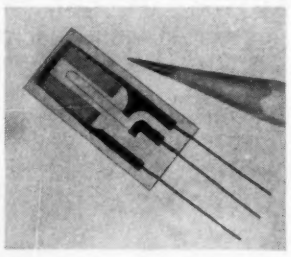
SELF-LOCKING PIN
now has spring-action lever



Spring-action lever now available on 5440 Series single-action Pip Pins allows operator with heavily gloved hand to seize and release the self-locking pin instantly. Pressure on lever allows steel balls to recede flush with outer pin surface for fast insertion or removal. Squeeze Grip Pip Pins are suited for equipment that is frequently disassembled, for interchanging units, and for quick connect or disconnect of emergency released equipment. T and L handle styles are available in diameters from ¼ through 7/16 in. • **Aviation Developments Inc.**, 210 S. Victory Blvd., Burbank, Calif.

▲ For more details circle NED-156 A on enclosed inquiry slip ▲

STRAIN GAGE
compensated for −350 to 850°F range



Dual element SR-4 foil gage is universally temperature compensated over a −350° to 850° F range to minimize the apparent strain caused by temperature change when bonded to any one of a broad variety of materials. A simple external circuit permits adjustment of the temperature response characteristics to compensate on any material within the gage's limits. One model sealed in a phenolic carrier is bonded with epoxy or phenolic cements, and another on a strippable backing is applied with ceramic cement. Both are ½ in. long. • **Baldwin-Lima-Hamilton Corp.**, Electronics & Instrumentation Div., 42 Fourth Ave., Waltham 54, Mass.

▲ For more details circle NED-157 A on enclosed inquiry slip ▲

JARKE MINI-MODULE STOCK STORAGE RACKS

Pre-fabricated Modular Units Quickly Set Up Or Taken Down By One Man

No Bolts, No Tools, Lightweight

Special nesting caps permit fast no-slip stacking, rigid vertically-interlocked tiers. Stack them to fit your needs exactly. Heavy-duty tubular steel construction.

JARKE MANUFACTURING COMPANY
6333 Howard St., Chicago 48, Illinois

Send for details and FREE set of miniature plastic Mini-Modules for easy storage planning.

BAR AND FLANGE RACKS • WIRE COIL RACKS • CRANE GRABS • STEELMOBILE

▲ For more details circle NED-158 A on enclosed inquiry slip ▲

INDUSTRIAL INKS To Mark Anything!

Whatever the substance, Phillips has an ink to mark it permanently and legibly—or can make one. Marking experts insist on "Clear Print" Wood Block Stamp Pads and Opaque Inks. They get clear, sharp, fast-drying impressions. Also inks for brush, pen, stencil or machine application available in a variety of colors and quantity containers.

★ Quick Laboratory Service On Your Problem Markings

★ To Permanently Mark . . . Metals, Plastics, Glass, Wood, Paper, Leather, Ceramics—glazed, varnished or lacquered surfaces and virtually every other known material.

For Complete Information Phone BAker 5-8201 or write:

PHILLIPS PROCESS CO. INC. 192 MILL STREET ROCHESTER, NEW YORK

▲ For more details circle NED-159 A on enclosed inquiry slip ▲

AIR CONTROL is Cost Control!

Reduce Operation and Maintenance Costs

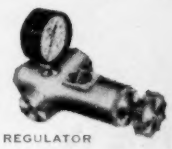
New devices for cutting costs

3-WAY CONTROL—regulates, lubricates and filters—simultaneously, only 2 connections necessary.

LUBRICATOR

3-WAY CONTROL

Balanced piston REGULATOR for accurate control and long trouble-free service.



REGULATOR

Automatic LUBRICATOR meters a protective oily mist to tools and instruments.

Cyclonic, dual FILTER action eliminates costly repairs and replacement of air tools.

Any combination of units available in one-piece housing.

FILTER

Investigate—send for Bulletin No. 80D

PERFECTING SERVICE CO.
332 Atando Ave. Charlotte, North Carolina
Baltimore - Buffalo - Chicago - Cleveland - Camden - Los Angeles
New York - Providence - Montreal - Toronto - Hamilton, Canada

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HANDLING CORROSIVES?

Get the facts on . . .

HEAT EXCHANGERS AND CONDENSERS—28 pages covering application, design, construction, and data on thermal properties, pressure loss and other basic information. *Bulletin 949, Pfaudler Heat Exchangers and Condensers.*

STORAGE TANKS—6 pages on application, capacities, and other facts about Glasteel tanks for storing products that are corrosive, sticky, or that cannot tolerate contamination. *Bulletin 975, Pfaudler Glasteel Chemstor Tanks.*

FITTINGS—Data sheet on elbows, tees, crosses and the characteristics and advantages of Glassed Ductile Iron Fittings.* *Bulletin 977, Glassed Ductile Iron Fittings.*

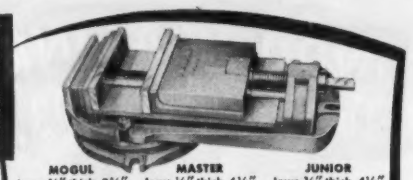
Any or all FREE. Write: Pfaudler Division, Dept. NED-10, Rochester 3, N. Y.

*Pat. Pending

PFAUDLER PERMUTIT INC.

▲ For more details circle NED-161 A on enclosed inquiry slip ▲

LW MILLING MACHINE DRILL PRESS-SHAPER VISES



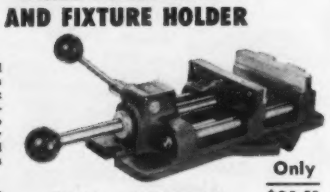
• Super-Strong • Flange Construction • All surfaces ground for extreme accuracy • Full length bearing on ground bar and machine ways • Steel jaws • Work holding surfaces are always at true right angles, or parallel to the table • Large Acme steel screw with replaceable bronze nut.

MOGUL Jaws ½" thick, 8½" wide and 2¾" deep open 6" when in place. Wt. 140 lbs. ONLY $180.00

MASTER Jaws ½" thick, 6½" wide and 2" deep open 4" when in place. Wt. 90 lbs. ONLY $90.00

JUNIOR Jaws ⅜" thick, 4½" wide and 1¾" deep open 2¾" when in place. Wt. 40 lbs. ONLY $40.00

L-W ADJUSTO-QUICK CONTROL DRILL PRESS VISE AND FIXTURE HOLDER



The first wide range drill press vise that safely handles both rigid and non-rigid work without distortion. Quick action and adjustable pressure at the turn of a knob. Easy hand pressure on hardened and micro-ground bar locks and holds the work.

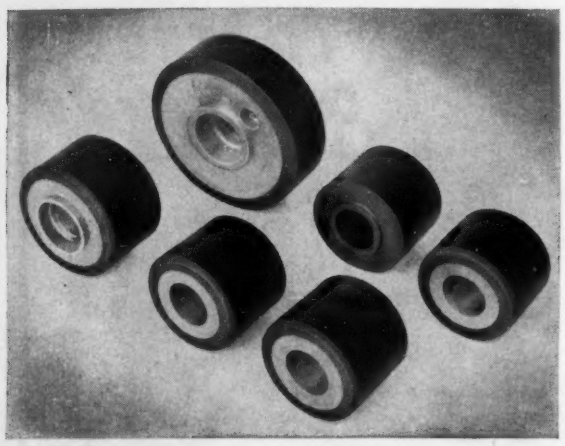
Precision-built to cut tooling costs and increase production. Heavy removable jaw inserts allow simple, quick adaption for low-cost jigs and fixtures.

		Only
4" Model	(3½" Opening)	$31.50
6" Model	(6¼" Opening)	$44.00
8" Model	(8½" Opening)	$57.50

Available with or without swivel base.
SEE YOUR INDUSTRIAL SUPPLY DISTRIBUTOR OR ORDER DIRECT, GIVING DISTRIBUTOR'S NAME

LW CHUCK COMPANY
51 SO. ST. CLAIR ST.
TOLEDO 4, OHIO

▲ For more details circle NED-162 A on enclosed inquiry slip ▲



NEW
URETHANE WHEELS OF DU PONT ADIPRENE® OUTLAST RUBBER 5 TO 1

Here's an entirely new kind of resilient material for industrial wheels . . . ADIPRENE L, a urethane elastomer made possible by Du Pont research.

Solid tires, caster and pallet wheels made from this new Du Pont elastomer carry far heavier loads than conventional rubber wheels, yet are resilient, non-marring. They resist oils, mild acids and alkalies, temperature extremes, weathering and aging.

And most important, ADIPRENE L wheels outlast conventional rubber wheels by many times. Their resistance to abrasion, cutting, chipping and abuse is outstanding. In one plant, they outlasted rubber eight times. In another, where rubber wheels usually lasted only a few days, they were still in good condition after *six months.* Four- and five-fold increases in service life are common.

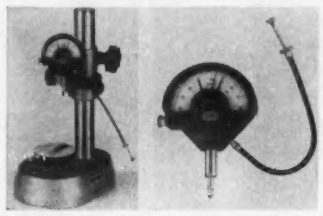
Send the coupon today for complete information.

E. I. du Pont de Nemours & Co. (Inc.)
Elastomer Chemicals Department NED-1
Wilmington 98, Delaware
☐ I would like to know more about ADIPRENE L industrial wheels. Please send literature and list of manufacturers.
☐ I am particularly interested in the following types of wheels
☐ Other information
Name
Firm
Address
City State

DU PONT SYNTHETIC RUBBER
NEOPRENE HYPALON® VITON® ADIPRENE®
Better Things for Better Living . . . *through Chemistry*

▲ For more details circle NED-163 A on enclosed inquiry slip ▲

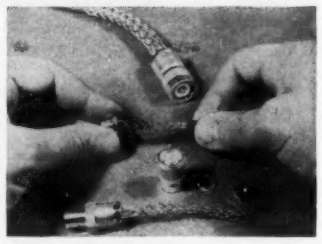
DIAL INDICATORS read to 0.00005 and 0.0005 in.



Direct readings to 0.00005 and 0.0005 in. are provided by two Mauser dial indicators which have full scale ranges of 0.004 and 0.016 in. and 20-0-20 and 8-0-8 graduations, respectively. Possible damage to jeweled, shockproof mechanism is prevented by an extra lift of 5/32 in. over scale range. The 6-in. capacity stand shown at left has a 2½-in. diameter lapped steel table shaped to accommodate odd pieces and will accept all dial indicators with an 8-mm shank. Indicators sell for $32.50 and $16, respectively; the stand, for $29.75. • **Scherr-Tumico,** 200 Lafayette St., New York 12, N. Y.

▲ For more details circle NED-164 A on enclosed inquiry slip ▲

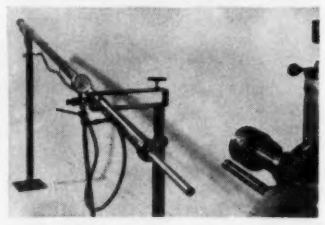
COAXIAL CABLE CONNECTORS with spiral-wire cable grip



Like the ancient Chinese finger puzzle, the unusual spiral-wire cable grip on these rf coaxial cable connectors holds the cable tighter the more the cable is pulled. Advantages of this Kellems grip are complete flexibility of cable, uniform distribution of pull without pinching the insulation, and light weight. Cable will actually rupture before the wire strain-relief grip fails. Over 2000 types of coaxial connectors are available, all of which can be ordered with the spiral wire grip on diameters down to 0.212 in. • **Gremar Mfg. Co.,** 9 N. Wakefield Ave., Wakefield, Mass.

▲ For more details circle NED-165 A on enclosed inquiry slip ▲

AUTOMATIC BAR FEED for machines with hollow spindles



Operating on air pressure of less than 10 psi, this low cost automatic bar feed offers rapid stock feed for any screw or cutoff machine, turret or engine lathe with a hollow spindle. Stock cylinder is heavy walled seamless steel tubing. A bar stock centering cup on a sealed ball bearing eliminates whipping. It operates when the collet or chuck jaws are opened. Model A (illustrated) has a 1⅜-in. diameter capacity, and Model B takes bars with 2-in. diameters. • **Ben H. Anderson Manufacturers,** Morrisonville, Wis.

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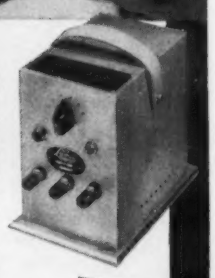
INCREASE PRODUCTION as much as 40%
CUT POWER CONSUMPTION
. . . with Luma

RESISTANCE SOLDER TOOLS



Designed to handle numerous production soldering jobs from fine, "pinpoint" precision to medium-heavy industrial operations. More than 16 styles of electrode holders to fit individual soft or hard soldering operations, (see above bench type holder).

Eighteen stages of heat with a 6-stage selector switch used in conjunction with 3 secondary terminals.

A wide range of power—5 to 1800 watts—quickly supplies concentrated heat at exact area—insures perfectly soldered joints with maximum—

SPEED • SAFETY • FLEXIBILITY • ECONOMY

Write today for New Catalog descriptive of Luma's Resistance Method of Soldering.

Luma
THE LUMA ELECTRIC EQUIPMENT CO.
P.O. Box 132-NED • Toledo, Ohio

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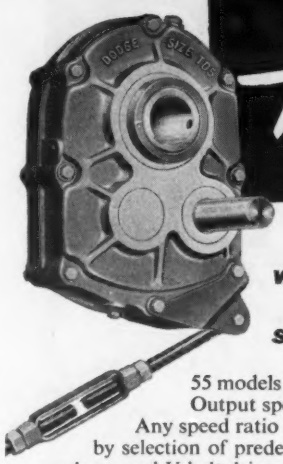
DODGE Torque-Arm



America's most widely used shaft mounted speed reducer!

55 models! Capacities up to 170 hp. Output speeds from 10 to 378 rpm. Any speed ratio up to 150 to 1 obtainable by selection of predetermined combination of reducer and V-belt drive. Torque-Arm is noted for its great ruggedness (semisteel housing), its high quality heat treated, helical steel gears, its very high efficiency, its cost saving characteristics. Ask your Dodge Distributor or write for bulletin.

DODGE MANUFACTURING CORPORATION
2100 Union Street, Mishawaka, Indiana

DODGE of Mishawaka, Ind.

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now available!

new pocket guide and catalog for better welding results

Nothing like it! Pocket size. Complete data on selection of rods and electrodes for welding stainless, low alloy, non-ferrous and light metals. Gives facts on applications, currents, preheating, annealing, AWS/ASTM classifications. Special sections on How to Get Better Stainless Welds, and Effect of Alloying Elements on Weld Metal. Comprehensive list of valuable technical data available. FOR FREE COPY write ARCOS CORPORATION, 1500 South 50th Street, Philadelphia 43, Pa.

ARCOS | Filler Metal Specialists

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Eliminates 4-piece motor mount clamps...

One-Piece SPEED CLIP®
snaps into place, cuts costs!

- High quality spring steel
- Snap into place with simple tool
- Designed to hold tight under severest vibration and high starting torque in any mounting position
- Fit most popular fractional-horsepower motor sizes

Write for free descriptive literature

TINNERMAN PRODUCTS, INC.
BOX 6688 • DEPARTMENT 12 • CLEVELAND 1, OHIO

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Easiest Way To Use Epoxy Resin Adhesives

. . . Fenwal's new custom designed Adhesive Pack

(Pat. applied for)

Saves time — mixture is exactly proportioned to give you better bonding and strength. No time wasted in measuring.

Reduces waste — packs available with formulations and amounts *tailored* to your work requirements.

Try it yourself! Send for a sample pack today — ONLY $1.00

This handy Adhesive Pack permits you to mix resin and curing agent without exposure to air or skin. The resin is contained in a sturdy, clear, plastic Pack. The curing agent is hermetically sealed in an attached collapsible tube. Until you use the Pack, the resin and agent are kept separate; then your mixing is done within the plastic bag. Shelf life is one year.

Available in virtually all formulations and de-gassed Packs . . . custom-made to your specifications, Fenwal Adhesive Packs are quick, safe, easy, and economical. Send for your sample Pack today — only $1.00 or write for a free folder to Adhesives Pack Department, Fenwal Incorporated, 271 Pleasant St., Ashland, Massachusetts.

Fenwal Controls Temperature . . . *Precisely*

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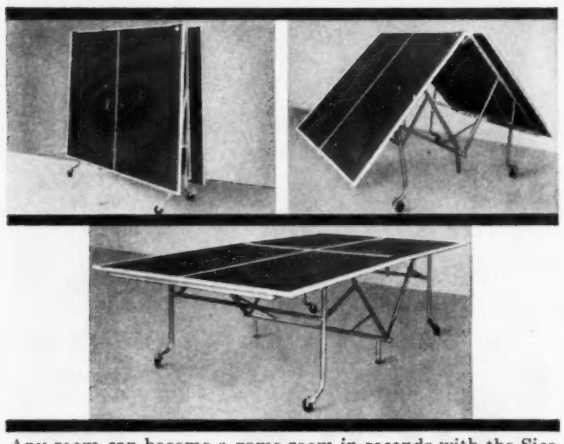
roll it in . . . . PLAY *roll it out . . .* TUCK IT AWAY



Any room can become a game room in seconds with the Sico "Tuck-Away." It rolls and unfolds quickly, safely. Exclusive "Floating Fold" carries entire weight of the table during folding and unfolding. Full regulation size (USTTA approved)—yet folds to only 18" x 60" for storing. Its unitized steel frame is fully guaranteed for 10 years. The "Tuck-Away" provides an efficient solution to the need for leisure time relaxation—in industry, hotels, schools, hospitals, and other institutions. Get complete information on the "Tuck-Away" by writing.

SICO MANUFACTURING COMPANY, INC.
5215 Eden Ave. So., Minneapolis, Minn., Dept. 1105.

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FOR FAST TALK THAT PAYS OFF

your business needs... ELECTRONIC AMPLICALL INTERCOMMUNICATION

the "clear line" to everyone in your business...

available with privacy handset, light and chime signals

★ AMPLICALL saves time and cuts costs because it provides *2-second speech contact* within and between all departments of your business. At the touch of a button, you get information, issue instructions, hold conferences, speed action in plant and office. AMPLICALL takes the load off busy switchboards, ends wasteful walking and waiting—pays for itself in speedier, more efficient operations. There is an AMPLICALL system for your exact needs. Get the facts today.

★ **See your Classified Phone Book under "Intercommunication" for the nearest AMPLICALL specialist—or write us direct for full details.**

RAULAND-BORG CORPORATION
3535-H Addison St., Chicago 18, Ill.

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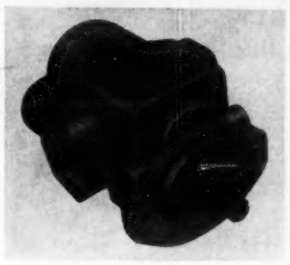
STEEL DECOILERS hold up to 10,000-lb coils

Most models in this line of decoilers for steel and other materials are electric powered, and are adaptable to automated operations. They handle coils weighing up to 10,000 lb, with their expanding mandrels accepting material widths to 30 in. Optional equipment includes shears, cut-off line, and run-out tables. ● **Elkhart Welding & Boiler Works, Inc.**, 2132 S. Main St., Elkhart, Ind.

▲ For more details circle **NED-174 A** on enclosed inquiry slip ▲

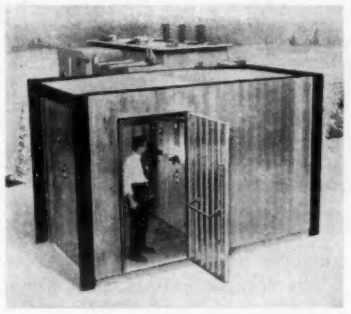
HYDRAULIC GEAR PUMPS also serve as hydraulic motors



Suitable for many construction and general industrial uses, Model PM-106 and PM-110 hydraulic gear pumps are pressure-balanced units with automatic adjustment of wear plates. Based on actual continuous operation, they are respectively rated 13 and 20 gpm at 2000 rpm and 1500 psi. Pumps can also be used as high-efficiency motors and may be driven clockwise or counterclockwise. ● **Be-Ge Mfg. Co.**, Box 67, Gilroy, Calif.

▲ For more details circle **NED-175 A** on enclosed inquiry slip ▲

SWITCHGEAR HOUSING made from extruded aluminum panels



Aluma-Clad housing for alternating-current switchgear is made up from Reynolds extruded aluminum panels which snap together to form the structure. Interlocking panel edges form a permanent, leakproof joint and add rigidity to the over-all structure. Light weight and modular construction speeds handling and installation at job site. Installation is on a concrete pier foundation. Available in all sizes and voltage classes, housings are offered with either 5 or 15-kv metal-clad switchgear. ● **Allis-Chalmers Mfg. Co.**, 918 S. 70th St., Milwaukee 1, Wis.

▲ For more details circle **NED-176 A** on enclosed inquiry slip ▲

Available in Stainless Steel, Silicon Bronze, Brass, Aluminum and Steel

JACOBSON NUT MFG. CORP. Kenilworth, New Jersey

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REPAIR FOR YOUR B&D TOOLS

Check the Yellow Pages under "Tools-Electric" for the location of the nearest Black & Decker factory service branch or authorized service station.

Free tool inspection when requested • Genuine B&D parts used • Factory-trained technicians • Standard B&D Guarantee at completion of recommended repairs • Fast service, reasonable cost, always.

Or write for address of nearest of more than 50 branches and service stations to: THE BLACK & DECKER MFG. CO., Dept. 19018, Towson 4, Md.

Black & Decker QUALITY TOOL SERVICE

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FREE BULLETIN

FULLER EQUIPMENT FOR THE PROCESS INDUSTRIES

12 pages of Photos Diagrams Charts

. . . tell you and show you how to move mountains of dry pulverized, crushed and granular materials to and from, up, over, around and under your plant to storage . . . and from storage to processing points . . . and do it economically.

It's called Fuller Equipment for the Process Industries. Just write for Bulletin G-3 . . . today. 1358 G211

FULLER COMPANY
154 Bridge Street
Catasauqua, Pa.

Fuller — pioneers in harnessing air

SUBSIDIARY OF GENERAL AMERICAN TRANSPORTATION CORPORATION

"Offices in Principal Cities."

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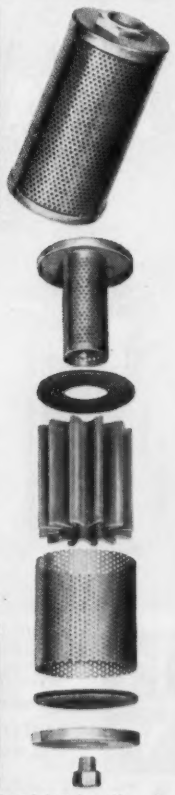
New GENERAL SUMP FILTER



Removes Lint, Dirt, Sludge from Hydraulic and Lubricating Oils

5 SIZES . . . 8 to 50 GPM! Meets J.I.C. Standards—3000 Series General Filters have a heavy-duty, compression sealed, perforated metal housing which resists corrosion, cleans easily, assures maximum flow rates with minimum pressure drop. Standard pleated element is 100-mesh monel — others optional. Install filter individually or in *multiples* for greater capacity.

WRITE for Catalog Sheet 1369.

GF—1394

GENERAL FILTERS, INC.
43800 Grand River Avenue
Novi, Michigan
IN CANADA: Canadian General Filters, Ltd., 39 Crockford Blvd., Scarborough, Ontario

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PACKAGING ?

ELLISCO CANS are specially suited for YOUR PRODUCTS

Packaging industrial products? Let us quote on your requirements. We are specialists in the manufacture of cans to meet your needs, and offer:

1 many standard and special sizes.

2 numerous types of cans: screw top, friction top, slip cover and tear strip—plain or lithographed.

3 small or large quantities.

4 familiarity with Military Packaging Specifications.

Write, wire or call for samples and prices.

Ellisco

GEORGE D. ELLIS & SONS, INC.
American & Luzerne Streets, Dept. P-2
Philadelphia 40, Pa., BAldwin 3-3405

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ANCHOR ... THE PLEDGE OF PERFORMANCE

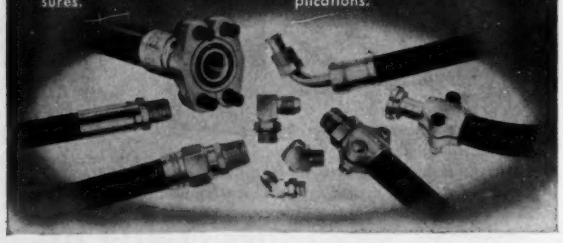
IN HYDRAULIC TRANSMISSION LINES

Anchor Pressed-On Couplings for high, medium and low pressure hose assemblies.

Anchor 4-Bolt Split-Flange "O" Ring Couplings for high, medium and low pressures.

Anchor Reusable Couplings—Regular or Clamp Type—for high, medium and low pressures.

Anchor Adapter Unions, Pipe Fittings, and SAE Boss Type Fittings for wide range of applications.



Andy Anchor Says: "My condensed Bulletin No. 59S briefly describes the complete Anchor line. Send for it now!"

ANCHOR COUPLING CO. INC.
384 North Fourth Street, Libertyville, Illinois
Branch Plants: Dallas, Tex., Plymouth, Mich.

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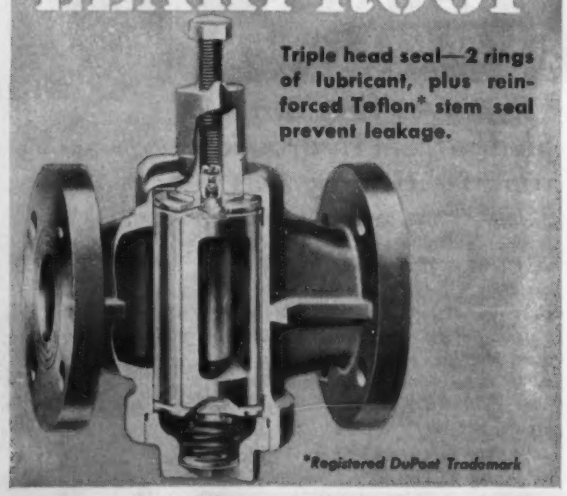
In the spots that count . . .
HOMESTEAD® VALVES ARE
LEAKPROOF



Triple head seal—2 rings of lubricant, plus reinforced Teflon* stem seal prevent leakage.

*Registered DuPont Trademark

Controlled, pressurized lubrication system forces full lubricant seal around ports, and over all sealing surfaces—positively prevents sticking. Write today for full details.

HOMESTEAD VALVE MANUFACTURING COMPANY
P.O. Box 84 • Coraopolis, Pa.

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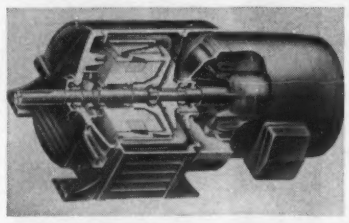
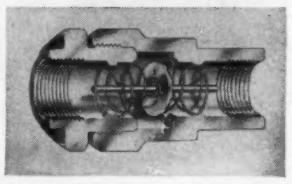
ADJUSTABLE SPEED DRIVES
stepless units have 5-100 hp ratings



Automatic control provides close speed regulation on Kinatrol line of eddy current coupling adjustable speed drives. The stepless units with output ratings from 5 to 100 hp are offered as a complete package with drive unit, enclosure with controls for both coupling and integrally mounted Tri-Clad alternating current motor, and operator's station. Ratings through 20 hp are capable of continuous operation down to 100 rpm at rated torque, providing a speed range of 17:1. Applications include conveyors, paper machinery, wire drawing equipment, plastic extruders, grinders, and many other types of equipment. • **General Electric Co.**, Direct Current Motor & Generator Dept., Erie, Pa.

▲ For more details circle **NED-184 A** on enclosed inquiry slip ▲

SAFETY SHUTOFF VALVE
stops flow when line break occurs



Flow of air, gases, or liquids is not impeded by this safety valve in normal operation. But when a break occurs in the hose or pipe beyond the valve, the disc closes on the valve seat and instantly stops the flow. Valve opens again after the break is repaired. It is offered for all hose or pipe diameters for pressures to 125 psi or higher, flows from 15 to 190 cfm, or to any specification. • **Sands Safety Valve Co.**, 3606 Federal St., Camden 5, N. J.

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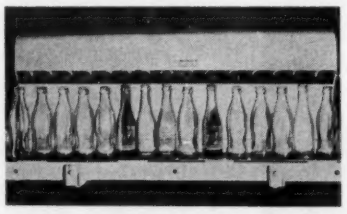
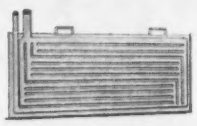
BOTTLE INSPECTION LIGHT
shows up cracks, chips, dirt



Breaks, cracks, chips, and dirt in bottles or other glass and clear plastic containers are revealed by the Terriss inspection light. It is mounted on user's conveyor and affords full top view of the neck as well as the complete container. For semi-opaque brown or amber colored bottles, sodium vapor lights can be furnished. Units are offered in 18, 36, and 48-in. lengths with or without spot magnifying lens. Processing speeds of 60 to 300 units per minute are possible, depending upon size of light. • **Consolidated Siphon Supply Co.**, Terriss Div., 22 Wooster St., New York 13, N. Y.

▲ For more details circle **NED-186 A** on enclosed inquiry slip ▲

PLATECOIL®

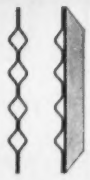


Standard PLATECOIL units

FACTORY-ASSEMBLED PLATECOIL banks

In factory-fabricated styles to fit your needs

ROLLED to specified diameters



SINGLE EMBOSSED OR DOUBLE EMBOSSED

The PLATECOIL units above are just a few of the many standard and special units that are effecting savings and better performance in a wide range of tank and process heating and cooling applications. If you are looking for faster heat up, more heat transfer in less space, savings on installation or maintenance or an answer to other heat transfer problems, it will pay you to investigate PLATECOIL.

Send for free BULLETIN P57 for more information.

PLATECOIL® DIVISION
TRANTER MANUFACTURING, Inc.
LANSING 9, MICHIGAN

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WELD CLEANING
. . . do it faster, for less with OSBORN *Power Brushes*

WRITE FOR FREE SPEC SHEET . . . includes useful application data plus complete specifications on Disc-Center® . . . Cup and Keb® weld cleaning brushes. Helps you select the *right* Osborn brush for your job—from normal to extra-heavy duty. Write *The Osborn Manufacturing Company, Dept. N-14, Cleveland 14, Ohio.*

Osborn Brushes

POWER, PAINT AND MAINTENANCE BRUSHES
METAL FINISHING MACHINES . . . AND FINISHING METHODS
FOUNDRY PRODUCTION MACHINERY

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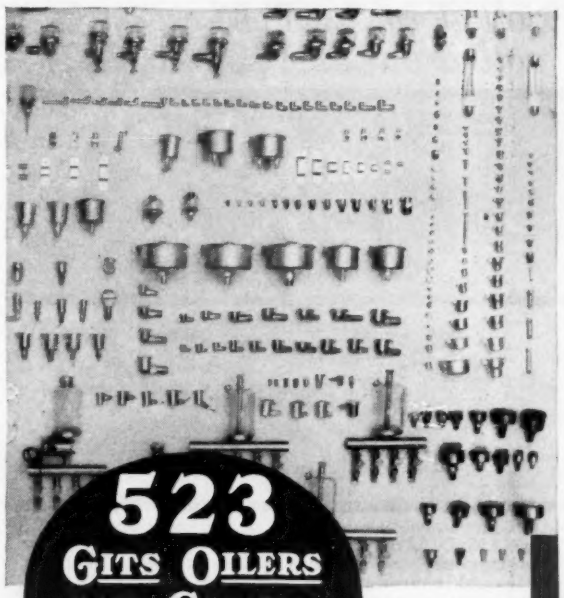
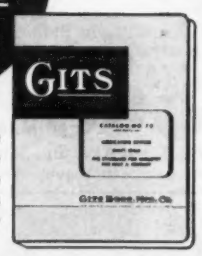


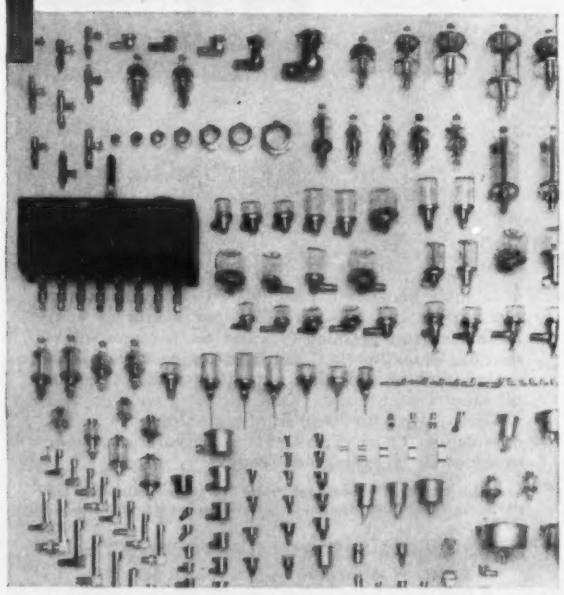
523 GITS OILERS AND GAUGES READY TO SHIP



Largest selection available anywhere. You save time and money, because the one you want is always right in stock. Send for complete Catalog.

GITS BROS. MFG. CO.
1833 S. Kilbourn Ave. Chicago 23, Ill.

Specialists in Lubricating Devices and Shaft Seals for Almost Half-A-Century



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NEW! BLACKMER

VARI-FLO PUMPS and PROPORTIONING SYSTEMS

You'll benefit from new economy and efficiency with Blackmer rotary Vari-Flo Pumps and Proportioning Systems for stream blending of liquids or transferring liquids at varying flow rates from the same pump. Eliminates the need for variable-speed motors, makes old-fashioned batch blending cumbersome and obsolete, saves costs and adds efficiency to a variety of processes.

FREE CATALOG!
Write for free Vari-Flo Pump Bulletin No. 600

"liquid materials handling"® equipment

BLACKMER
PUMP COMPANY
Grand Rapids 9, Michigan

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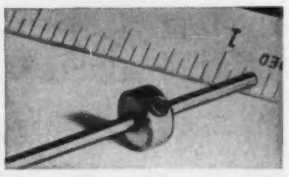
ENGINEER ENDS WORK STOPPAGES CAUSED BY ACCIDENTAL GROUNDS

Maintenance engineer Tom Regan reports complete elimination of production shutdowns (due to accidental grounding) through the use of the Brunt Faultfinder. Regan, who recently located and cleared an accidental ground in twenty minutes by using a Faultfinder, says: "It paid for itself with this one use. A similar ground, before we had the Faultfinder, took three days to locate." Get the full details on the money-and-time-saving Brunt Faultfinder. Write today to Parr Manufacturing, 48 Austin St., Newark, N. J.

▲ For more details circle NED-191 A on enclosed inquiry slip ▲

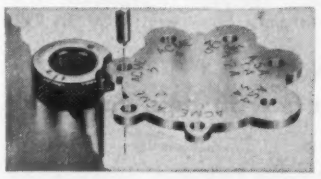
MINIATURE SHAFT COLLARS for 1/16 and 3/32-in. shafts



Tiny alloy steel collars for 1/16 and 3/32-in. shafts can be used to take up thrust; for locking, spacing and positioning shafts; and other miniaturized mechanical applications. They have Unbrako high torque hex socket set screws with standard cup points. Other points, as well as Nylok self-locking types, are optional. ● **Standard Pressed Steel Co.**, Box 581, Jenkintown, Pa.

▲ For more details circle NED-193 A on enclosed inquiry slip ▲

DRILL BUSHING JIG for lock screw drilling and tapping



All sizes of ASA and Acme lock screws for drill bushings can be located with this free plastic locating jig. It makes possible quick and precise location for drilling and tapping for lock screws. The compact, 1/8-in. thick tool has a 2-in. diameter. A 3/16-in. high lift is molded into the bottom of the template for locating with a 3/16-in. diameter center punch. ● **Acme Industrial Co.**, 200 N. Laflin St., Chicago 7, Ill.

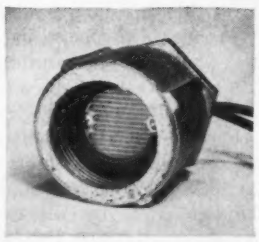
▲ For more details circle NED-194 A on enclosed inquiry slip ▲

SEALED FLASHLIGHT BATTERY industrial type has long life

Service life two and one-half times longer than standard Size D flashlight cells is reported for this steel-sealed industrial battery. Made with a steel cap and bottom plate joined to a steel jacket, the cell is leakproof. ● **Burgess Battery Co.**, Freeport, Ill.

▲ For more details circle NED-195 A on enclosed inquiry slip ▲

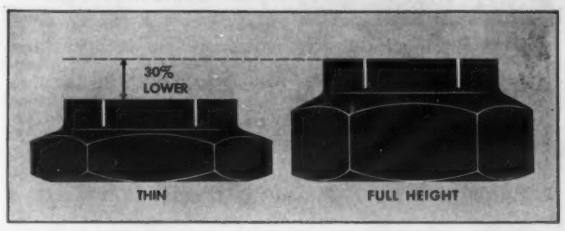
RELAY SENSING ELEMENT solid state photosensitive unit



Photosensitive Model P-CE sensing element will operate standard series-wired relays or solenoid actuated devices with 2200-2800 ohm coil resistance and rated 50 ma at 115 v ac. Element is a compact, moisture resistant, cadmium sulfide cell. Mounting hub is threaded for 3/4-in. conduit. Price is $10. ● **Berkeley/Dynamics**, 2831 Seventh St., Berkeley 10, Calif.

▲ For more details circle NED-196 A on enclosed inquiry slip ▲

FLEXLOC thin nuts save weight, space, production time



FLEXLOC self-locking thin nuts are 30% lower—and correspondingly lighter—than full-height locknuts. They lock with shorter bolts; fit in spaces where ordinary locknuts will not go; help you design more compact bolted joints. They speed production, because fewer turns are needed to seat them.

Despite their reduced height, FLEXLOC thin nuts provide high locking reliability. This is because in a FLEXLOC every thread, including those in the locking section, carries a full share of the tensile load. And because FLEXLOCs require no auxiliary locking devices, they facilitate design and specification, simplify inventory, save steps in assembly. They also save on maintenance, because they can be reused repeatedly. See your SPS distributor or write direct for new Bulletin 866.

INDUSTRIAL FASTENER Division SPS
JENKINTOWN 24, PENNSYLVANIA

▲ For more details circle NED-197 A on enclosed inquiry slip ▲

New **MONARCH** *developments*

STOP PREMATURE RIM SEPARATION!

MONARCH SOLIDS FEATURE NEW COMPOUND AND BONDING PROCESS . . . REDUCE REPLACEMENT COSTS

Embedded metal scrap, chemicals and excessive heat cause premature solid tire failure by destroying the bond between the tire and rim. MONARCH engineers solved this problem by combining an advanced rubber-to-metal chemical bonding process with a new, extra tough, natural rubber stock . . . Compound T-5100. Field tests prove that *MONARCH solids now feature superior resistance to rim separation* caused by the above factors. And cost-conscious buyers are specifying MONARCH solids to cut replacement costs!

FOR ADDITIONAL DETAILS . . .
write direct or see your Monarch tire dealer.

THE MONARCH RUBBER COMPANY
260 LINCOLN PARK
HARTVILLE, OHIO

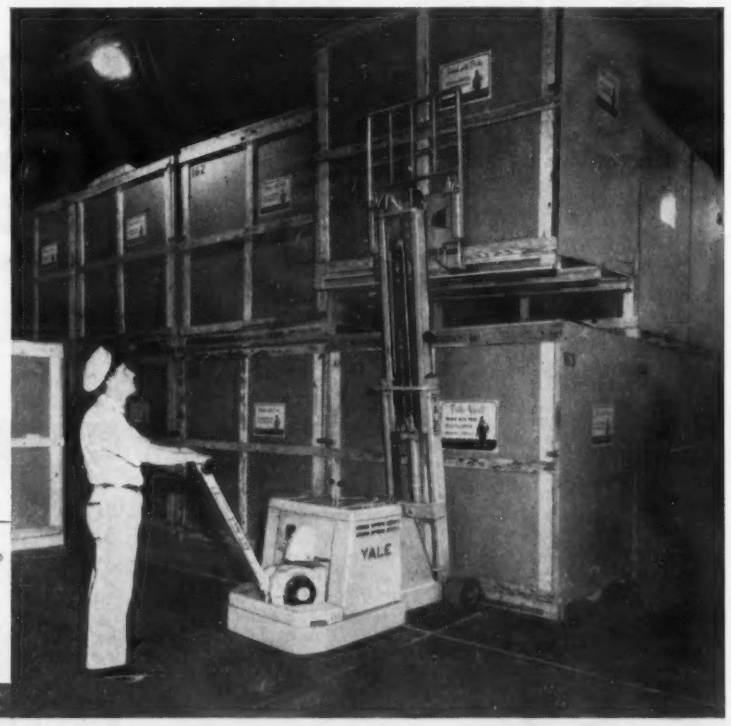
7-225 General Motors Bldg. Detroit, Mich. • 2353 No. California Ave. Chicago, Ill. • Western Warehouse: Reno, Nevada

▲ For more details circle NED-198 A on enclosed inquiry slip ▲

Yale Worksavers

are powered for the job! These lightweight, highly maneuverable electric "walkie" trucks are powerful and easy to handle—ideal for elevators and areas with low-rated floor capacities where larger-powered trucks cannot operate. These sturdy trucks offer maximum load stability and a power choice of 6 cell 13 plate (ample for most types of handling) and 6 cell 23 plate batteries. Yale Worksavers are easy to maintain, cutting overhead and downtime. Available in pallet, platform, forklift and electric tractor models. Capacities up to 10,000 lbs.

For full information, call your Yale representative or send for free brochure to The Yale & Towne Manufacturing Co., Materials Handling Div., Philadelphia 15, Pa. Dept. MT1



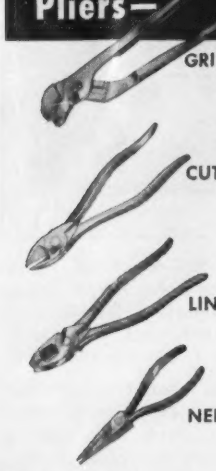
YALE
INDUSTRIAL LIFT TRUCKS
TRACTOR SHOVELS • HOISTS
YALE & TOWNE

Yale Materials Handling Division, a division of The Yale & Towne Manufacturing Co. **Manufacturing Plants:** Philadelphia, Pa., San Leandro, Calif., Forrest City, Ark. **Products:** Gasoline, Electric, Diesel, LP-Gas Industrial Lift Trucks • Worksavers • Warehousers • Hand Trucks • Industrial Tractor Shovels • Hand, Air, Electric Hoists

▲ For more details circle NED-192 A on enclosed inquiry slip ▲

Snap-on "Vacuum Grip" Pliers—

A handful of gripping power for 1,001 jobs



GRIPPING — Available in offset and straight models. Powerful leverage, deep-cut teeth hang onto object being serviced. Snub nose reaches into tight spaces.

CUTTING — Tough alloy steel and selective heat treating provide durable joint action, long cutter blade life. Matched cutters overlap with shearing action to cut better, wear longer.

LINEMAN — Powerfully built for gripping, twisting, hammering, cutting. Narrow jaws for easy entry into tight spots. Insulated handle grips available.

NEEDLE NOSE — Made to retain precise jaw alignment and accurate meeting of tips over long use. Bent needle nose, pin-gripping and thin-nose duck bill models handle any work in hard-to-reach areas.

Choose the *Snap-on* pliers you need. Over 60 models and sizes. See your *Snap-on* man or write for complete catalog.

SNAP-ON TOOLS
FOR ALL INDUSTRY
8110-A 28th Avenue • Kenosha, Wisconsin

▲ For more details circle NED-200 A on enclosed inquiry slip ▲

CUT PRODUCTION COSTS 7 WAYS

WITH SALT BATH HEAT TREATING!

1. **Distortion is negligible.** Finish machining can usually be completed *before* parts are hardened.
2. **More uniform heating throughout.** You get better, more consistent results!
3. **Complete surface protection of parts.** No scale! No decarb!
4. **Much faster heating cycles.** You get more work done in less time.
5. **Far less floor space needed.**
6. **Lowest equipment cost.**
7. **No skilled labor needed.**

The most efficient heat treating principle for a wide variety of work... Pioneered by Ajax in the largest line of furnace types and sizes for modern production needs.

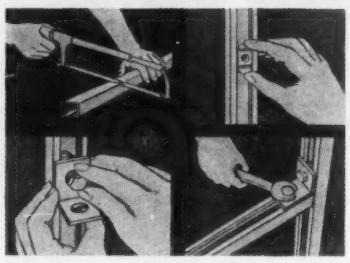
WRITE FOR CASE HISTORY BULLETINS!
(Specify those desired)

- ☐ Hardening ☐ Annealing
- ☐ Martempering—Austempering
- ☐ Aluminum Brazing
- ☐ Cleaning, Descaling, etc.
- ☐ Carburizing, Cyaniding ☐ Other

AJAX ELECTRIC COMPANY
103 Allen Street
PHILADELPHIA 23, PA.

▲ For more details circle NED-201 A on enclosed inquiry slip ▲

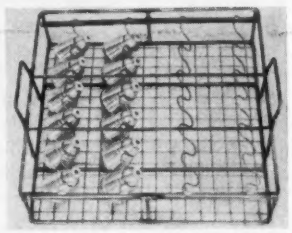
METAL FRAMING makes racks and pipe hangers



Four basic sizes are available in FaMet preformed metal framing, an easy-to-install, adjustable channel offered with fittings and hangers. It is used for constructing pipe racks, pipe suspension systems, and special purpose racks, as well as benches and bins. Piping systems are supported from the frames by FaMet pipe hangers. Continuous concrete inserts are used to anchor the framing or other units to the structure. Installation requires only a saw and wrench. • **Fee & Mason Mfg. Co.**, Manasquan, N. J.

▲ For more details circle NED-202 A on enclosed inquiry slip ▲

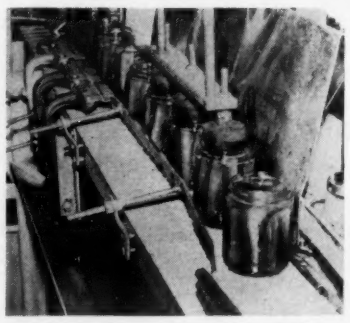
METAL PARTS RACK protects objects with thin walls



Wire holders in this fitted Wiretex rack are shaped to hold the product securely and keep them from touching each other or any part of the basket. Close tolerance, delicate, or thin-walled metal parts are held during degreasing, work transfer, and primary and secondary operations. Custom-made holders in the 16 x 16 x 3½-in. racks are replaceable. Stackable racks have a steel frame and carrying handles, and a mesh floor in any standard specification. • **Wiretex Mfg. Co.**, 40 Mason St., Bridgeport 1, Conn.

▲ For more details circle NED-203 A on enclosed inquiry slip ▲

FLAT-TOP CHAIN CONVEYORS molded of Delrin acetal resin



Less than one-third the weight of steel, flat - top conveyor chains molded of Delrin acetal resin do not corrode and require no lubrication in food and chemical packaging, bottling, or canning applications. Low friction property reduces jarring when chains start or stop and permits smooth operation at speeds over 200 fpm. The flat links show exceptional resistance to deformation under load and virtually no warpage or discoloration under severe use. • **Fenco, Inc.**, 125 N. Racine Ave., Chicago 7, Ill.

▲ For more details circle NED-204 A on enclosed inquiry slip ▲

HONEYCOMB and sandwich panel FASCO FASTENERS by Delron
PATENT PENDING

AIRCRAFT, MISSILE AND ELECTRONIC INDUSTRIES!

Illustrated above are two of the many new Delron structural design fasteners now available for Honeycomb and Sandwich Panels.
• Write for engineering data.

... Largest manufacturer of specialized Sandwich Panel Fasteners.

THE DELRON COMPANY, INC.
5224 Southern Avenue, South Gate, California
LOrain 7-2477

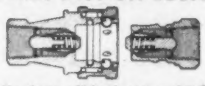
▲ For more details circle NED-205 A on enclosed inquiry slip ▲

FOR QUICK FOOLPROOF FLUID LINE CONNECTIONS
Here's the coupling for the job

To connect a Hansen Two-Way Shut-Off Coupling, you merely pull back the sleeve on the Socket and push in the Plug. To disconnect, just pull back the sleeve. Available in brass or steel with female pipe thread connections from ⅛" to 1" inclusive.

Write for the Hansen Catalog
Here is an always ready reference when you want information on couplings in a hurry. Lists complete range of sizes and types of Hansen One-Way Shut-Off, Two-Way Shut-Off, and Straight-Through Couplings.

HANSEN SERIES HK®
TWO-WAY SHUT-OFF COUPLING



Instantly shuts off both sides of line . . . prevents loss of liquid, gas or pressure.

Representatives in Principal Cities

THE HANSEN MANUFACTURING COMPANY
4031 WEST 150th STREET • CLEVELAND 35, OHIO

▲ For more details circle NED-206 A on enclosed inquiry slip ▲

BIN-FLO USES SMALL VOLUME OF AIR AT LOW PRESSURE
KEEPS BULK MATERIALS MOVING

BIN-FLO units in bins, chutes, hoppers, etc., restore flow characteristics to dry, finely ground materials which tend to pack or bridge in storage. Types for all materials and conditions. No moving parts; simple installation; negligible operating cost; no maintenance cost.

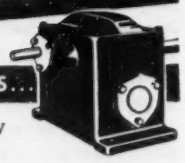
BIN-DICATOR the original diaphragm-type bin level indicator. In successful use for over 20 years. **ROTO-BIN-DICATOR** new, motor-driven paddle type; excellent on bins under pressure or vacuum, and for general application. Also explosion-proof units, U.L. listed.

THE BIN-DICATOR CO.
13946-A Kercheval • Detroit 15, Mich.
Write for detailed literature or call VAlley 2-6952

WE SELL DIRECT • PHONE ORDERS COLLECT

▲ For more details circle NED-207 A on enclosed inquiry slip ▲

Abart *Specializes in a complete line of* **Speed Reducers and Gears**



PRECISION-BUILT SPEED REDUCERS...

Over 75 types and sizes for any speed reduction need. Spiral, worm, combinations . . . single and double reductions. Over 75 types and sizes—1/50 to over 400 hp. Ratios to 10,000 to 1.

Request Abart Speed Reducer Catalog

CUSTOM-CUT GEARS...

No stocks. Spur, spiral, bevel, helical, internal, worm, rack, sprocket —cut to your exact specifications. Any quantity, any material . . . 5/7 D.P. to 96 D.P.—¼" P.D. to 18" P.D. Send b.p. and specs or sample for estimate.

Request Abart Gear Bulletin

ABART GEAR and MACHINE CO.
4831 WEST 16th STREET • CHICAGO 50, ILLINOIS

▲ For more details circle NED-208 A on enclosed inquiry slip ▲

Helicoid Gages give **Sustained Accuracy,** even on the toughest jobs

★ Exclusive Helicoid movement has no gears, no teeth. Shock-proof construction protects accuracy through millions of cycles.
★ Bourdon tubes available in four materials—bronze, steel, stainless steel, and K Monel—won't stretch, crack, or leak.
★ Six cases, including new solid-front safety case, meet every mounting requirement.
★ External pointer adjustment can't be jarred out of position.
★ A complete selection of gages and accessories for hydraulic, chemical, and other service.

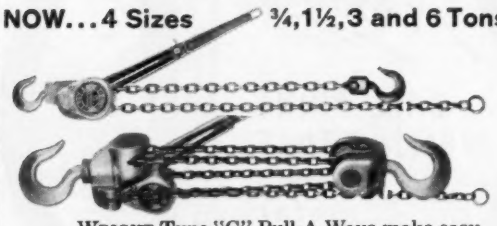
Write for Catalog DH-65.

HELICOID GAGES ACCO
Helicoid Gage Division
American Chain & Cable Company, Inc.
929-J Connecticut Avenue • Bridgeport 2, Conn.

▲ For more details circle NED-209 A on enclosed inquiry slip ▲

New ¾-ton Type "C" Pull-A-Way

NOW... 4 Sizes ¾, 1½, 3 and 6 Tons



WRIGHT Type "C" Pull-A-Ways make easy work of hundreds of quick hook-up jobs. Now available in four sizes—¾, 1½, 3 and 6 ton—Type "C" Pull-A-Ways are portable, safe and rugged. Corrosion-resistant modern aluminum alloy castings are used for gear case, handle and covers of all models. Hooks, load chain and chain sheave are made of alloy steel. Positive, dependable load brake securely holds load at any point. Lubricated for life. Weights: ¾-ton, 14 lbs; 1½-ton, 23½ lbs; 3-ton, 36½ lbs; 6-ton, 63 lbs.

Write to our York, Pa., office for Bulletin DH-56A

WRIGHT HOISTS
Wright Hoist Division • American Chain & Cable Company, Inc. ACCO
York, Pa., Atlanta, Chicago, Denver, Detroit, Houston, Los Angeles, New York, Philadelphia, Pittsburgh, San Francisco, Bridgeport, Conn.

▲ For more details circle NED-210 A on enclosed inquiry slip ▲

Jib Cranes for Any Requirement

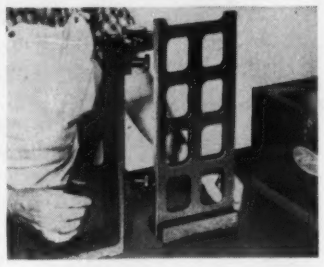
WRIGHT Wall Bracket Jib Cranes are the perfect answer for supplementary use to a regular traveling crane or monorail track—or for individual use in bays, on sides of shops, etc. Hinge plates are fitted with Hyatt Roller Bearings or Bronze Bushings. These and all other fittings are made of annealed electric steel. Double tie rods connected to top and bottom fittings allow for "take-up" without use of turnbuckle. Note: mast not furnished. A complete line of WRIGHT pillar type jib cranes is available. If you like, jib crane fittings can be bought separately for local crane assembly.

Write our York, Pa., office for Bulletin DH-300

WRIGHT CRANES
Wright Hoist Division • American Chain & Cable Company, Inc. ACCO
York, Pa., Atlanta, Chicago, Denver, Detroit, Houston, Los Angeles, New York, Philadelphia, Pittsburgh, San Francisco, Bridgeport, Conn.

▲ For more details circle NED-211 A on enclosed inquiry slip ▲

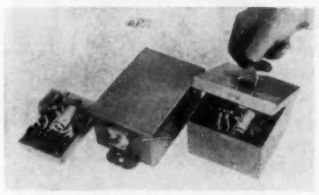
90-DEGREE ANGLE GAGE
has two adjustable contact points



A simple means for checking 90-degree work angles is provided by the Robbins 90-degree indicator gage which is furnished with a dial indicator, master square, and hardwood box. Used in conjunction with angular sine plates, other angles can be checked. Dial gage registers plus or minus errors to 0.0001 in. Master square serves as an accurate reference for setting indicator gage. Distance between contact points can be changed over range from 1⅛ to 17¾ in. • **Omer E. Robbins Co.**, 11961 Dixie Ave., Detroit 39, Mich.

▲ For more details circle NED-212 A on enclosed inquiry slip ▲

PULSE CONTROLLER
adjusts electrical impulse length



Three ranges of pulse adjustability from 30 to 500 milliseconds are available in Model PC-600, PC-601, and PC-602 pulse controllers, with several mountings and enclosures. They extend or shorten the duration of an electrical impulse when used with hydraulic-pneumatic machinery or other equipment. Longer periods of time can be ordered. An output pulse up to 5 amp at 115 v ac and 5-millisecond lag are other features. System recharging time is only 15 milliseconds. • **Warco Industries, Inc.**, 6625 Delmar Blvd., St. Louis 5, Mo.

▲ For more details circle NED-213 A on enclosed inquiry slip ▲

FLAME CUTTING TOOL
burns through concrete and metal

Concrete, metal, or any other known hard material of any thickness is pierced at a speed of 7 in. per minute with the Oxweld ACL - 4 Powder Lance. Oxygen and Oxweld metallic powder mixture are burned at the end of a length of consumable black iron pipe, producing 8000° F heat that melts ferrous and nonferrous materials in its path. Special iron and aluminum powder mixtures are used on concrete. Lance consumes about 1000 cu ft of oxygen, 40 lb of powder, and 10 ft of iron pipe per square foot of concrete. Quick-release chuck-type pipe holder accepts unthreaded pipe or tubing. • **Linde Co.**, 420 Lexington Ave., New York 17, N. Y.

▲ For more details circle NED-214 A on enclosed inquiry slip ▲

Light, Low-Cost Electric Chain Hoists

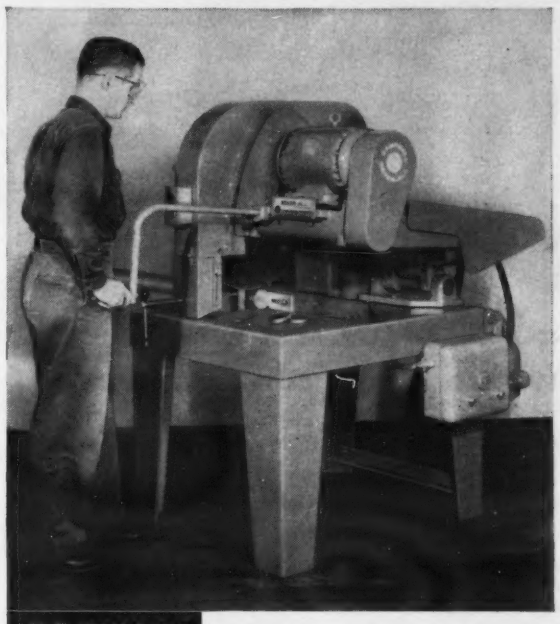
Two Capacities:
Single Chain–300 to 2000 lbs
Double Chain–3000 to 4000 lbs

The WRIGHT Electric Chain Hoist has fewer moving parts than any other chain-type electric hoist. Result: hoist working efficiency is increased, maintenance costs are decreased. This rugged, compact hoist features a double braking system—self-locking worm gear reduction, easy to adjust motor brake. Hoisting gears are made of high grade phosphor bronze—worms are heat treated alloy steel. All gears operate in a continual oil bath. Alloy load chain is wick lubricated for long life, heat treated for resistance to wear. Factory tested at 50% of overload.

Write to our York, Pa., office for Bulletin DH-73B

WRIGHT HOISTS
Wright Hoist Division • American Chain & Cable Company, Inc. ACCO
York, Pa., Atlanta, Chicago, Denver, Detroit, Houston, Los Angeles, New York, Philadelphia, Pittsburgh, San Francisco, Bridgeport, Conn.

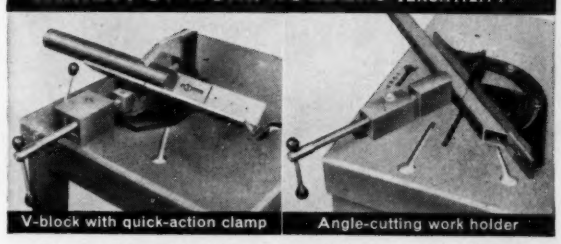
▲ For more details circle NED-215 A on enclosed inquiry slip ▲



NEW! GREATEST CUT-OFF CAPACITY IN ITS CLASS!

This newest addition to the Sever-All line of abrasive cutting machines—the Model 2-A—provides greater cutting capacity and more flexibility than any other machine in its class. Check these important advantages: **Big capacity** • cuts 4" round or square solids, 5½" O.D. pipe or tubing, 6" x 1" flat stock, 6" angle iron and 8" channels. Cuts practically all metals. **Fast operation** • accurate cuts at rates of 2 to 3 seconds per square inch. **Power oscillation** • oscillation is the forward and backward motion of the wheel as it is fed down into the cut. It provides extra cutting capacity, longer wheel life, cooler cutting, and reduced operator fatigue. **Quality cuts** • clean, smooth cuts, require little or no finishing operation. **Economy** • specially developed Sever-All wheels provide lowest cost per cut.

VARIETY OF WORK HOLDERS GIVES UNUSUAL VERSATILITY



V-block with quick-action clamp — Angle-cutting work holder

Choose the work holders you need from several optional arrangements. These include the vise-type holder shown on the machine at top, plus the V-block and angle-cutting fixtures above. Screw-type and quick-action clamping may be used interchangeably.

Write for details on the new Model 2-A Sever-All abrasive cutting machine. Ask for Bulletin DH-299

SEVER-ALL ABRASIVE CUTTING **MACHINES** ACCO
Allison-Campbell Division
American Chain & Cable Company, Inc.
930 Connecticut Avenue, Bridgeport 2, Conn.

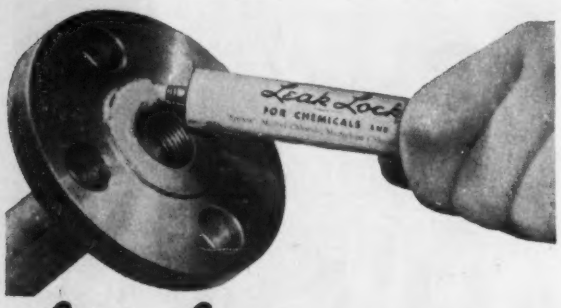
▲ For more details circle NED-216 A on enclosed inquiry slip ▲

WRIGHT Safeway Hand Hoists—In 12 Sizes —½ Ton to 50 Tons

WRIGHT Safeway Hand Hoists are built to take it—inside and out. Sealed construction protects all vulnerable parts in high analysis steel housing. Gears, pinions, drive spindle (also top and bottom hooks) are nickel-chrome-molybdenum alloy steel mounted on anti-friction bearings. Gear train is enclosed in oil-tight chamber. Load wheel, with 5 or more pockets, can be reversed for double life. Alloy steel load chain is heat treated to resist wear, ductile to withstand shock loads. Weston type load brake. Factory tested at 50% overload. Write to our York, Pa., office for Bulletin DH-164C.

WRIGHT HOISTS
Wright Hoist Division • American Chain & Cable Company, Inc. ACCO
York, Pa., Atlanta, Chicago, Denver, Detroit, Houston, Los Angeles, New York, Philadelphia, Pittsburgh, San Francisco, Bridgeport, Conn.

▲ For more details circle NED-217 A on enclosed inquiry slip ▲



Leak Lock STOPS LEAKS where other compounds fail!

Here's a simple, economical solution to many troublesome leaking joint problems. Leak Lock holds LP, gasoline, oils, gases, petro-chemicals and refrigerants that eat through ordinary joint compounds. It's remarkably tough, highly adhesive, remains flexible indefinitely . . . the joint compound that stretches rather than breaks. Years of use have established its advantages in stopping wasteful or hazardous leaks in the petroleum, chemical, atomic energy, electronic, refrigeration and other fields.

Approval by Underwriters' Laboratories for Gas and Oil Equipment List: Also for Propane and Butane.

FREE SAMPLE—Leak Lock is available in handy tubes and in cans. Write on your letterhead for sample tube.

HIGHSIDE CHEMICALS INCORPORATED
14 Colfax Avenue • Clifton, N. J.

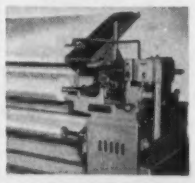
▲ For more details circle NED-218 A on enclosed inquiry slip ▲

GPE Controls WEB and STRIP GUIDES Save TIME...MONEY...MATERIAL!

43 MODELS ...one just right for your job!

Medium-duty model with air sensing, positioning knives on rubber calender.

Photoelectric reflected light head following line on printed carton stock to eliminate slitting.



Light-duty unit with air sensing, applied to textile machinery.

Send for NEW Catalog EG-84

Photos and diagrams representing thousands of installations; complete details on world's broadest line of web and strip guides.

- Laminate without trim!
- Speed up presses while you keep accurate side register!
- Slit without side trim!
- High-speed textile tentering with minimum selvage.
- Track conveyor belts, abrasive belts, etc., up to 5,000 feet per minute.
- Winds 100-ton steel coils evenly to protect edges.
- Web edge position, porosity, opacity, or reflectance sensed by air or photoelectric heads.
- Non-clog air sensing head (patented) never touches web, works perfectly with linty, dusty, or abrasive webs.
- Hydraulic actuation for unlimited power and speed, high frequency response.
- Engineered by specialists in industrial automatic controls.

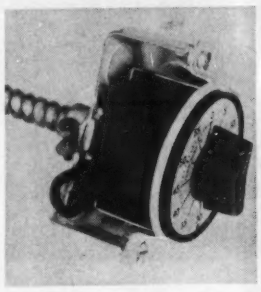
GPE Controls, Inc.
258 E. Ontario St., Chicago 11, Ill.

GPE Controls | A GENERAL PRECISION COMPANY | formerly Askania Regulator Company

A subsidiary of General Precision Equipment Corporation

▲ For more details circle NED-219 A on enclosed inquiry slip ▲

SWITCH ADAPTER PLATE adapts time switch to octagon box



Existing toggle switch operation can be converted to time switch operation with this adapter plate for 4-in. octagon switch boxes. With the plate, Mark-Time 70,000 Series panel-mounted time switches can be used in this type box to control tumbling machines, plating equipment, fans, battery chargers, and other equipment. • M. H. Rhodes, Inc., 30 Bartholomew Ave., Hartford 6, Conn.

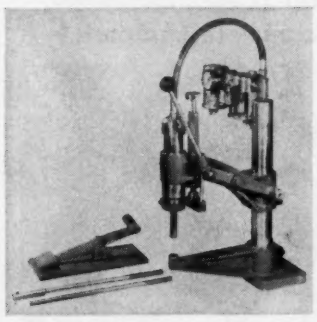
▲ For more details circle NED-220 A on enclosed inquiry slip ▲

MOBILE WORKTABLES for assembly, tool carrying uses

Line of mobile worktables mounted on heavy-duty 3-in., rubber tread casters is conservatively rated for 250-lb loads. Tables are used to transport materials and tools, assemble stock orders, mount special fixtures, or wheel work through progressive assembly stages. The 30-in. high Model EX-45 shown has a 24 x 24 x 5/8-in. plywood top faced with phenolic plastic. Other sizes are offered. Additional clip-on shelves are optional. • Easy-Up, Inc., 1006 State St., Racine, Wis.

▲ For more details circle NED-221 A on enclosed inquiry slip ▲

PLANISHING MACHINE makes 2000-6000 strokes per minute



Wrinkles are smoothed out of an 18-in. circle of mild steel up to 20-gage in thickness by the Model 150-RHP-090 planishing machine. The bench mounted pneumatic machine is operated by foot pedal, with its hammer repeating from 2000 to 6000 times per minute, depending upon the air pressure used. Machine is also suited for riveting, staking, crimping, driving pins, and inserting bearings and bushings. It has a 9-in. throat, 11-in. vertical clearance, and 1½-in. maximum traverse movement. Pressure regulator and gage, 1¼-in. planishing tool, and 1¼-in. removable anvil button are included. • Heidrich-Nourse Co., 631 E. Third St., Los Angeles 13, Calif.

▲ For more details circle NED-222 A on enclosed inquiry slip ▲

FOR THE LIFE OF YOUR PRODUCT

BRADY Self-Bonding **NAMEPLATES**

Poly-Plates—Add new color, new beauty, new *Life* to your products with Brady self-bonding Poly-Plates. Give you unlimited freedom in nameplate design. Made of Miracle Mylar* for scratch, scuff, acid and solvent resistance. Permanent subsurface metalized printing. Sparkling gold, silver—plus all colors. No screws, rivets, heat or activators needed to apply. Stay bright, clean, legible—*for the Life of Your Product.*

*DU PONT'S REGISTERED TRADE MARK

LADY SCHICK

QUIK-PLATES

HAZELTINE TECHNICAL DEVELOPMENT CENTER INC. TC-

Colorful Anodized ALUMI-THIN Nameplates with permanently etched printing.

BRADY-CALS

Pressure-sensitive, Super-thin Vinyl Nameplates, Top-surface Printed . . . Enduro-Kote Over-coating protected.

WRITE FOR INFORMATION AND FREE TESTING SAMPLES

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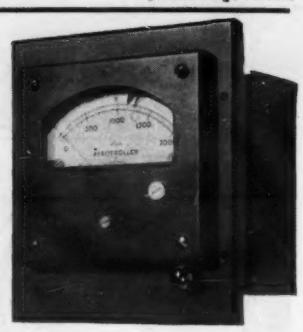
Manufacturers of Quality Pressure-Sensitive Industrial Tape Products, Self-Bonding Nameplates, Automatic Machines for Dispensing Labels, Nameplates, Masks and Tape • Est. 1914.
In Canada: W. H. BRADY CO. OF CANADA, LTD. 95
1 Research Road, Brampton, Ontario, Phone Glendale 1-4420

▲ For more details circle NED-223 A on enclosed inquiry slip ▲

AUTOMATIC TEMPERATURE CONTROL Alnor PYROTROLLER®



C_m—Mode of control On-Off.
R_T—High-reliability electron tube operates relay on command of temperature indicator.
S_R—Sensitivity of response is such that a temperature change of only .3% of full scale will cause control action.
S^2—Accuracy of rugged movement is plus or minus 1% full scale.
T/W—Torque-to-weight ratio is high of this double-pivoted, moving coil, permanent-magnet type movement. Hardened steel pivots. Phosphor bronze springs. Sapphire bearings.
TC_1—Alnor® Thermocouple Accessories offer you the best engineered control package for all applications from 0-400°F. to 0-3000°F.

$$\frac{C_m\,(T/W^{3/2})\,(1+R_T)}{S_R} \times AM + TC_1 = \text{Alnor automatic Pyrotroller temperature control.}$$

Get complete details on this compact electronic indication-controlling pyrometer by writing to: Pyrotroller, Illinois Testing Laboratories, Inc., Room 529, 420 N. LaSalle St., Chicago 10, Illinois.

ILLINOIS TESTING LABORATORIES, INC.
420 N. LaSalle St., Chicago 10, Illinois

▲ For more details circle NED-224 A on enclosed inquiry slip ▲

USE THE **Nissen** BALL POINT WRITING TUBE make permanent marks on metal wood plastic glass

This ball point marker saves considerable time in marking, numbering or coding products made of wood, metal, plastic and glass. It is widely used because: • tube with ball point makes application easy on rough or smooth surfaces • special, fast drying opaque ink withstands heat and weathering • marks will not chip, peel, fade or rub off • 7 different colors are available • 3 different size ball points make fine or broad lines

Write, wire or call for a trial order

JOHN P. NISSEN, JR. Co., *manufacturers*
GLENSIDE, PENNSYLVANIA • CALL TUrner 4-4664

▲ For more details circle NED-225 A on enclosed inquiry slip ▲

CIRCO ultrasonic cleaning units achieve precision cleaning... IN SECONDS!

Model BC60
Capacity 1¼ gal.
$350

Whenever **absolute** product cleanliness is a critical factor...whenever cleaning is a production bottleneck ...whether you need a bench model or a huge custom-designed conveyerized system, CIRCO engineers can recommend the specific CIRCOSONIC unit to solve your problem. Write for your free copy of "Tips on Ultrasonic Cleaning".

CIRCO ULTRASONIC CORP.
Specialists in Ultrasonic Energy
51 Terminal Ave., Clark, New Jersey • FUlton 8-8600

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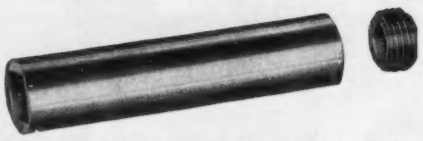
How SQUARE HOLED SLEEVES SPEED UP TOOL-MAKING!



One of the most difficult problems in toolmaking can be solved easily and quickly with Sturdy Square Holed Sleeves. The perfection of broached square holes can be had in boring bars, milling cutters and many other applications at a small fraction of the cost of imperfect hand-made square holes. The Sturdy Square Holed Sleeve consists of a round sleeve with a perfectly square hole broached through the center. This hole is tapped at one end to receive a back-up screw which is furnished with the Sleeve. The Sleeve can be sweated or pressed into a drilled and reamed hole to make a perfectly square accurate hole in a very few minutes.

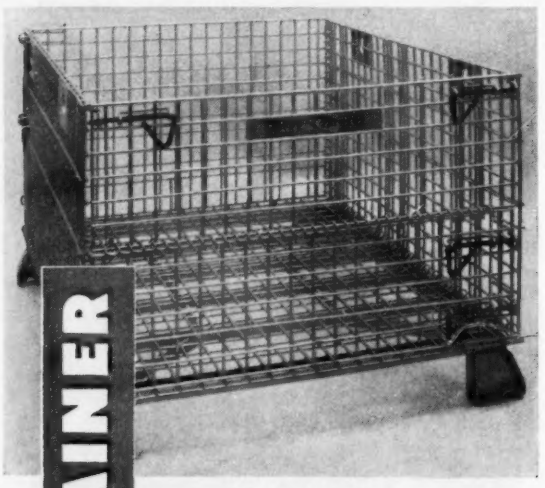
The Sturdy Square Holed Sleeve will save you many hours and many dollars in the making of boring bars, tool holders and other tools requiring square holes.

SLEEVES MADE IN FOLLOWING SIZES: 3/16, 1/4, 5/16, 3/8, 7/16, 1/2, 5/8, 3/4, 1"

Write for Literature

STURDY BROACHING SERVICE, INC.
23514 TELEGRAPH RD., SOUTHFIELD, MICH.

▲ For more details circle NED-227 A on enclosed inquiry slip ▲



WIRE-TAINER

STORING ★ HANDLING ★ SHIPPING

- Virtually indestructible—electro-welded steel rod construction
- Saves money coming and going—easy to lift and stack, folds flat to save on return trips
- One and two-ton capacities
- Side or end openings
- Available with eyes for crane lifting, increased side heights, caster plates and casters, horizontal and vertical dividers

FREE LITERATURE describing all WIRE-TAINER advantages. Drop us a line.

SPRINGPORT STEEL PRODUCTS COMPANY
Springport, Michigan

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GEAR PROBLEMS? Check with- FAIRFIELD!

If you use gears in the product you make, we believe it will pay you, as it has others, to become acquainted with FAIRFIELD—the place where fine gears are produced to meet your specifications EFFICIENTLY, ECONOMICALLY! Fairfield's production facilities are unexcelled for making all kinds of accurate, automotive type gears such as are now finding wide use in all branches of industry: for tractors, trucks, and buses . . . for agricultural implements . . . for construction machinery . . . for machine tools. Ask for latest literature describing Fairfield's facilities. Your inquiry will receive prompt attention.

FAIRFIELD
Manufacturing Co., Inc.
2335 S. Concord Road
LAFAYETTE, INDIANA

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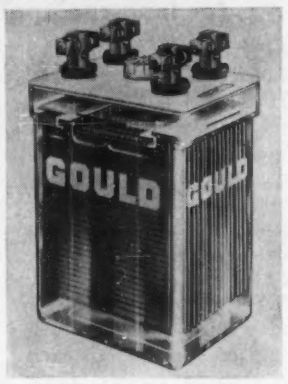
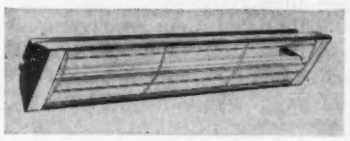
LIGHTWEIGHT BATTERIES in 50 to 1140 amp-hr capacities



Increased battery room capacity and reduced storage rack requirements are afforded by line of lightweight calcium stationary batteries for standby use with switchgear, alarm, telephone, control, and signaling systems. High impact - resistant Plastrite jar saves 30 to 40 per cent floor space and will not bulge or warp under heat. Available capacities are 50 to 1140 amp-hr. Batteries are leakproof and feature elements that are secured against shifting. • **Gould-National Batteries, Inc.,** 467 Calhoun St., Trenton 7, N. J.

▲ For more details circle NED-230 A on enclosed inquiry slip ▲

INFRARED HEATER directs radiant heat where needed



Infrared heat energy can be directed precisely where needed with this Infratube zone - controlled heater. High energy infrared emitter is housed in pure fused quartz tubing and set in a semiparabolic reflector with special end reflectors to insure optimum coverage. Unit reaches maximum heat in 90 sec. Single or multiple mounts can be dial controlled to required temperature. Wall and ceiling mounted units are initially available, with portable models due shortly. • **Apextro Products Co.,** 1821 N. Eastlake Ave., Los Angeles 31, Calif.

▲ For more details circle NED-231 A on enclosed inquiry slip ▲

PARTS POSITIONER inserts parts into work stations

Small parts are taken from a feed track and placed into nests, work stations, or auxiliary machine by this parts positioner at a rate of 5400 per hour. Cycle can be automatic for interlocking with other operations, or semiautomatic under operator control. Unit is actuated by air and controlled by electricity. Speed is adjustable where delicate or fragile parts are handled. • **Aidlin Automation, Inc.,** 1613 E. New York Ave., Brooklyn 12, N. Y.

▲ For more details circle NED-232 A on enclosed inquiry slip ▲

NEW MAUSER VERNIER CALIPER

STAINLESS STEEL HARDENED THROUGHOUT
FULLY LUSTRO-CHROME SCALE AND VERNIER

For Outside, Inside and Depth
6-1/4" Measuring Capacity
Reading Lower Scale — .001"
Reading Upper Scale — .001"

Lower and Upper Vernier Plates are adjustable (up to .020") for easy recalibration and adjustment

New flush type Vernier eliminates reading parallax
Double length vernier for more accurate and faster readings
Fine Cam-lock adjustment for easy setting at close limits
Overall length 8-1/8"

$19.75

Cat. No. 193 furnished in clear unbreakable polyethylene case

For Complete Information request our 96 Page Catalog — Contact any of our 4 "Coast to Coast" Locations or your nearest Local Distributor.

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PRECISION MEASURING TOOLS AND INSTRUMENTS

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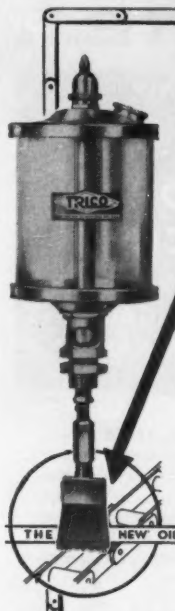
ST. JAMES: St. James, Minnesota
LOS ANGELES: 3337 West Olympic Blvd., Los Angeles 19, Cal.
CHICAGO: 5045 W. Harrison, Chicago 44, Ill.
When writing to any of the above locations, refer to DEPT H-1

▲ For more details circle NED-233 A on enclosed inquiry slip ▲

LOOK! OUTLASTS ORDINARY BRUSHES 10 to 1!



ONLY TRICO CHAIN OILERS

are equipped with this new, practically wear-proof oil applicator.

TRICO Chain Oilers automatically apply a film of oil to chains, gears, slides, flat or irregular surfaces, etc. They reduce link wear, stretch, rust and corrosion, eliminate costly, unnecessary repairs and replacements, shutdowns, lost production, waste of oil, etc. Electric solenoid or manual control. Available with various manifolds which can be connected in series so that up to 12 outlets can be serviced from one dispenser.

TRICO APPLICATORS ARE NOT BRISTLE BRUSHES

Do not overhang chain—no "side" dripping . . . do not spread or become distorted . . . need not be rotated to compensate for wear . . . can be shaped to any angle or contour.

SEND FOR FREE BUL. NO. 39

TRICO FUSE MFG. CO. MILWAUKEE 12, WIS.

▲ For more details circle NED-234 A on enclosed inquiry slip ▲

All-Service Xtra Cushion Solid Tire from Goodyear—a rugged performer from any angle!

New Slant on Pressed-on "Solids"

Have you ever seen an All-Service "Solid" from this angle before? Chances are, you haven't. But we photographed it this unique way to dramatize some very practical points.

For example, notice the tread design of this Goodyear Industrial Tire. Notice how the lugs are sharply angled for superior traction on ramps or wet, slippery surfaces.

Check the thickness of that tread too. It's extra thick for extra resilience and cushioning. The result: lower floor and truck maintenance costs. Less load damage, too.

Add to all this—tougher compounds for minimum chipping and cutting, lasting adhesion of rubber to base band, *plus* maximum smoothness and stability.

These advantages can mean only one thing to you: Superior service at lower cost. For all the facts on the All-Service—and the complete line of Goodyear Solid and Pneumatic Industrial Tires—call in your Goodyear Dealer. Or write: Goodyear, Industrial Tire Sales, Akron 16, Ohio.

INDUSTRIAL TIRES BY
GOODYEAR
More tons are hauled on Goodyear Truck Tires than on any other kind

All-Service —T. M. The Goodyear Tire & Rubber Company, Akron, Ohio

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COROCRETE...

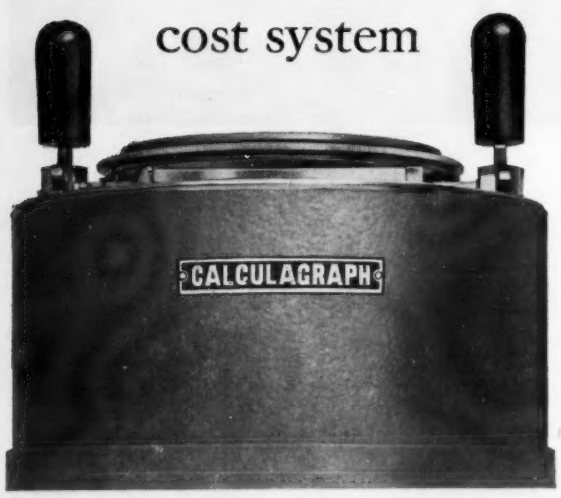
Quickly and easily applied, COROCRETE offers the greatest floor surfacing protection available today. Corocrete is 4 times stronger than concrete . . . is resistant to impact and abrasion . . . sets up faster . . . and is guaranteed protection against acids, alkalies and solvents. COROCRETE is recommended in chemical and food processing, plating and metal working industries.

COROCRETE is an exclusive development of CEILCOTE . . . a name long recognized as leader in the corrosion industry. Write today for catalog!

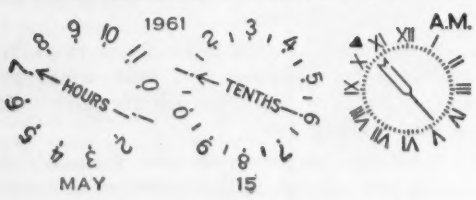
another product of
THE CEILCOTE COMPANY, INC.
4838 Ridge Road, Cleveland 9, Ohio

For more details circle NED-236 A on enclosed inquiry slip

Automatic foolproof elapsed time records for any cost system



Here's how Calculagraph, and only Calculagraph, does it!

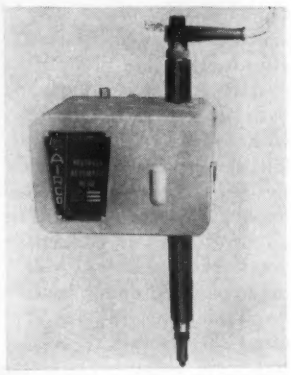


The Calculagraph computer completely eliminates time-consuming, error-producing manual computations to obtain elapsed time for labor costs. The exclusive Calculagraph principle automatically computes the "difference" in starting and finishing times and prints the elapsed time in hours and minutes or in hours and tenths (as shown). Arrows indicate the exact elapsed time. It can be "programmed", too, to subtract all "idle" time such as lunch periods, etc. No expensive changes are necessary to include Calculagraph in your cost system, regardless of what it is. Write today for complete information and enclose samples of your job tickets.

INDUSTRIAL DIVISION
CALCULAGRAPH Company 307 Sussex Street, Harrison, N. J.

For more details circle NED-237 A on enclosed inquiry slip

INERT GAS WELDING UNITS
two automatic operating models for long-run applications



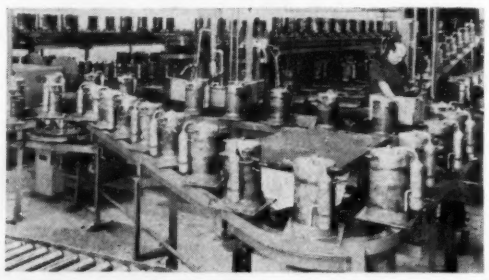
Electronically controlled Model HMH-D and HMH-E Heliweld tungsten-inert gas welders are used for alternating or direct current Heliwelding without an accessory control. Argon, helium, or mixtures of these shielding gases can be used. Welders are suited for long-run production welding on all ferrous and nonferrous metals where good weld appearance is necessary. Two models are identical, except that Model HMH-D has 3 and 12-in. offset bars for attaching the machine holder.

Both feature 360-degree rotation in any position with a 2-in. adjustment across the weld bead, and a 14½-in. vertical travel. They can be operated at a maximum of 500 amp continuous duty cycle using direct current straight polarity and thoriated tungsten electrodes, or 350 amp alternating current. Electrodes from 0.010 to 3/16 in. may be used. • **Air Reduction Sales Co.,** 150 E. 42nd St., New York 17, N. Y.

For more details circle NED-238 A on enclosed inquiry slip

TABLE CONVEYOR
carries loads on pallets and fixtures at worktable height

Variety of products is handled through assembly at worktable height on the Table-Cable conveyor, basically a standard Buschman cable conveyor run upside



down. Four-wheel carriers run on angle tracks, carrying light to medium weight loads on pallets or fixtures which are secured to the trolleys.

Corner turn component, with cable sheave and rider plate, is mounted on Timken bearings to give a 90 to 180-degree change of direction. Take-up turn has a movable sheave assembly and slotted bridge angle track. Compact drive turn has a slip safety clutch and variable speed. Various table elevations are accommodated by including inclines and hold-down angles. • **E. W. Buschman Co.,** Clifton & Spring Grove Avenues, Cincinnati 32, Ohio.

For more details circle NED-239 A on enclosed inquiry slip

"HYDROWAY®" world's most practical all purpose *dynamometer* and it's hydraulic

Model pictured shows Pre-Set Pointer, Used for Setting—Not to Exceed Loads, etc.

"HYDROWAY" Hydraulic Dynamometers are for practically all kinds of heavy duty weight and tension measurement for cable anchoring devices; equalizing guy-wire tension; measuring suspension bridge strain and for use as traction dynamometers. HUNDREDS OF USES: Such as Torque testing, Tensile testing, Traction testing. Can be used as a hanging scale for weighing, check weighing and inventory material weighing.

"HYDROWAY" Dynamometers are accurate; portable; compact; ruggedly built; maintenance free.

• CAPACITIES 0-5000 pounds to 0-10,000 pounds • Dial diameter—6" • Weather proof • No oiling or fluid required • Permanently sealed • Economically priced

Guarantee: All "Hydroway®" Dynamometers are guaranteed to be free of defects in workmanship and materials.

Made by the originators of *"HYDROSCALE®"*
(world's largest manufacturers of Hydraulic Crane Scales).

HYDROWAY SCALES, INC.
31288 Stephenson Highway Royal Oak, Michigan

For more details circle NED-240 A on enclosed inquiry slip

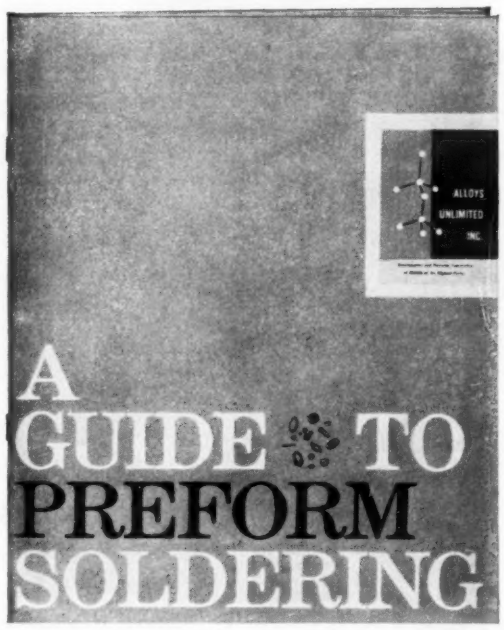
It's a fact... heavy-duty engines in ALLIS-CHALMERS lift trucks SAVE you more... MAKE you more

Heavy-duty industrial engines in Allis-Chalmers lift trucks stand alone in their ability to take tough work for long periods. The fact that they are the most rugged used in lift trucks means thousands of extra work hours, minimum maintenance, more years of service. The fact that they deliver more usable horsepower means they do extra work every hour — maneuver faster, climb steeper grades.

Put an Allis-Chalmers lift truck to work and you will see many advantages of its heavy-duty engine *immediately*. But it will take years to reveal *all* the benefits. Let your dealer give you more facts — and a demonstration. Allis-Chalmers, Milwaukee 1, Wisconsin.

ALLIS-CHALMERS
BH-122

For more details circle NED-241 A on enclosed inquiry slip



FREE! NEW 8 PAGE GUIDE

Complete information on solder preforms, their selection and use. Technical diagrams. Send for your copy today.

21-01 43rd AVENUE, LONG ISLAND CITY 1, N.Y. ALLOYS UNLIMITED INC

For more details circle NED-242 A on enclosed inquiry slip

so simple . . . so safe . . . so convenient

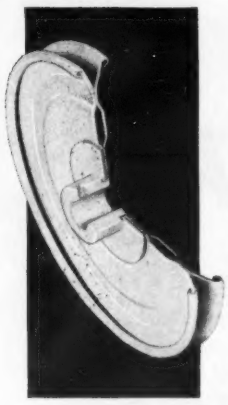
Just plug in and flip the handle ON, and the Heinemann Safelet goes on duty in your machine shop, factory, or laboratory . . . wherever you want complete protection of an individual circuit or piece of equipment.

This handy combination of circuit breaker and protected outlet is foolproof. The Heinemann circuit breaker can't be held closed against a short or overload. And like a light switch, it's a cinch to operate. Comes in 6, 10, 15, 20, 25, 30, 35, 40, and 50 amp ratings with a variety of single or duplex receptacles: twist-lock, polarized, T-slot and standard. Flush or surface mounting enclosures . . . pilot light models available if desired.

More information? Write for Bulletin 1000.

HEINEMANN ELECTRIC COMPANY
S.A. 1701 106 Plum Street, Trenton 2, New Jersey

For more details circle NED-243 A on enclosed inquiry slip



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FORMED STEEL PULLEYS

for your power transmission

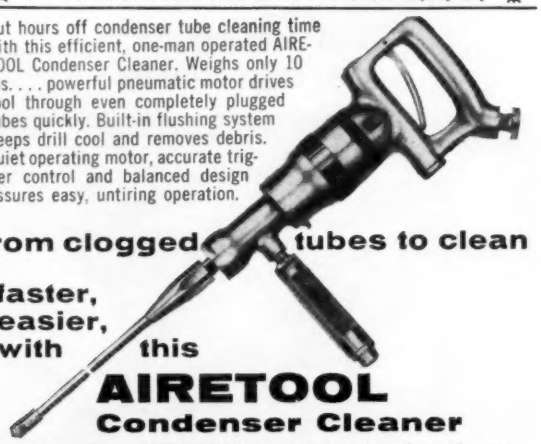
Engineered for Lawn Mowers, Garden Tractors, Compressors, Agricultural and Industrial Equipment. Smooth rolled edges reduce belt wear. Solid steel discs and hubs weather heavy loads and high speeds.

Write for Engineering booklet to help you specify your Pulley requirements.

SALEM STAMPING & MFG. CO., INC.
DEPT. 14 SALEM, OHIO

▲ For more details circle NED-244 A on enclosed inquiry slip ▲

Cut hours off condenser tube cleaning time with this efficient, one-man operated AIRETOOL Condenser Cleaner. Weighs only 10 lbs. . . . powerful pneumatic motor drives tool through even completely plugged tubes quickly. Built-in flushing system keeps drill cool and removes debris. Quiet operating motor, accurate trigger control and balanced design assures easy, untiring operation.



from clogged tubes to clean faster, easier, with this

AIRETOOL
Condenser Cleaner

Depend on AIRETOOL equipment to solve all your tubular maintenance jobs quicker . . . easier . . . better. Contact your nearby Airetool representative or write for information on AIRETOOL tube cleaning, cutting and expanding tools.

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MANUFACTURING COMPANY
316 S. Center St.
SPRINGFIELD, OHIO

BRANCH OFFICES: New York, Chicago, Tulsa, Philadelphia, Houston, Baton Rouge.
REPRESENTATIVES: in principal cities of U.S.A., Canada, Mexico, Puerto Rico, South America, England, Europe, Italy, Japan, Hawaii.
EUROPEAN PLANT: Vlaardingen, The Netherlands.
CANADIAN PLANT: 37 Spalding Drive, Brantford, Ontario.

▲ For more details circle NED-245 A on enclosed inquiry slip ▲

Designers & Engineers!

Get this new free bulletin on higher HP SPEED REDUCERS

Write today for your personal copy of this new 24-page detailed engineering Bulletin #405. It describes the finest, newly designed line of higher-horsepower worm and gear speed reducers — from one to forty horsepower.

Engineering data includes:

- Input Horsepower Tables
- Output Torque Tables
- Service Factors
- Application/Load Classifications
- Over-all Dimension Drawings

THE CLEVELAND WORM & GEAR COMPANY
3283 East 80th Street, Cleveland 4, Ohio
A subsidiary of Eaton Manufacturing Company

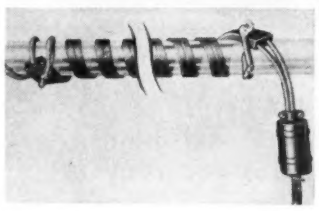
▲ For more details circle NED-246 A on enclosed inquiry slip ▲

THERMOELECTRIC GENERATOR
converts heat to electricity

Isolated or remotely located detection equipment, signalling devices, and electronic or telemetering equipment can be powered by the Pesco thermoelectric generator. It incorporates thermocouples which obtain heat from an outside or built-in source and convert it to electrical energy. Demonstration model shown uses a commercial container of propane gas to furnish heat. The generator is designed for very small power requirements of long duration. It can be designed into a compact capsule, possibly as small as a standard flashlight battery. • **Borg-Warner Corp.**, Pesco Products Div., 24700 N. Miles Blvd., Bedford, Ohio.

▲ For more details circle NED-247 A on enclosed inquiry slip ▲

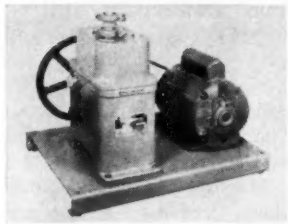
HEATING TAPE
4 to 20-ft double-element types



By employing parallel heating elements, both supply leads of Glas-Col heating tape are brought out at one end of the tape. Leads are wired to a twistlock plug so that a heater cord can be easily attached and removed. The 1/16-in. thick tapes are water and weatherproof and flexible. They are offered in five lengths from 4 to 20 ft in ½-in. width and in three lengths from 10 to 20 ft in the 1-in. width. Special lengths can be furnished. They operate at up to 480° F. • **Glas-Col Apparatus Co.**, 711 Hulman St., Terre Haute, Ind.

▲ For more details circle NED-248 A on enclosed inquiry slip ▲

VACUUM PUMPS
device prevents vapor condensation



Speeds of 33 and 100 liters per minute are available in West German made Leybold rotary ballast vacuum pumps. Single stage pumps attain an ultimate vacuum of 2×10^{-3} mm of mercury and two-stage series type pumps have an ultimate vacuum of 2×10^{-5} mm of mercury. All are equipped with a gas ballast device that prevents condensation of vapor in the pump. The oil-sealed units can be operated with or without the gas ballast device. • **Arthur S. LaPine & Co.**, 6001 S. Knox Ave., Chicago 29, Ill.

▲ For more details circle NED-249 A on enclosed inquiry slip ▲

S-T-R-E-T-C-H MACHINE HOURS KNOW YOUR SPEEDS use

Jones Tachometer with Large 10" Diameter Dial

JONES TACHOMETERS

Assure Higher Production — Quality Control
Increased Economy — Safety

SERVING MANY INDUSTRIES: textiles, plastics, chemical, rubber, paper and film, box and boxboard, automobile, marine, pulp and paper, railroad, and many others.
GUARANTEED ACCURACY: superior construction, trouble-free, unaffected by moisture, temperatures, electric currents. Reads in R.P.M. Y.P.M. F.P.M. G.P.M. etc.
GREATEST VISIBILITY: Dial sizes 3" to 20"—reading range, full 360°.

You will find them indispensable, as numerous others have, for use on all types of industrial machines.

Write for catalogs 58 and 147-D

JONES MOTROLA CORP.
Stamford, Conn.

▲ For more details circle NED-250 A on enclosed inquiry slip ▲

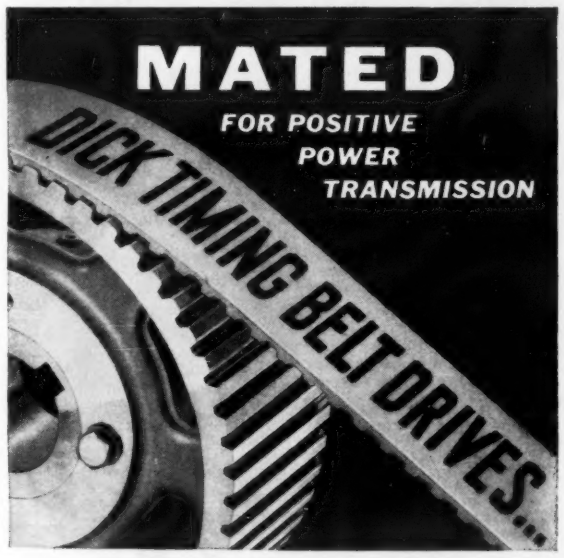
YOUR BEST MOVE IS TO MOVE WITH
MERRILL
MATERIAL HANDLING DEVICES

For Interesting Information write

MERRILL BROTHERS
56-13 Arnold Ave., Maspeth, N. Y.
3-R-5

▲ For more details circle NED-251 A on enclosed inquiry slip ▲

MATED
FOR POSITIVE POWER TRANSMISSION



Money-Saving Answer to Many Drive Problems

Rugged nylon faced neoprene teeth silently grip the mating sprocket, and give the revolutionary power transmission action of Dick Timing Belt Drives. When designing a machine, or selecting a drive, check their advantages, including:

Positive, Non-Slip Transmission of Power—No Lubrication—Minimum Friction and Backlash—Constant Angular Velocity—Compact Design—Quiet, Lightweight—Wide Speed Range—Economical Operation.

Made in range from sub-fractional h.p. to heavy-duty drives of 600 h.p., and more. Belts reinforced with steel cable. Dick "QD" pulley hubs give a solid grip on the shaft, provide for easy installation and removal. Send coupon for engineering manual containing complete information.

R. & J. Dick COMPANY, inc.
Leaders in the Development and Manufacture of Power Transmission and Conveying Equipment
TOTOWA, NEW JERSEY • CLifford 6-6400
CHICAGO • LOS ANGELES • SAN FRANCISCO • SEATTLE • PORTLAND

ATTACH TO YOUR LETTERHEAD AND MAIL

R. & J. Dick Company, Inc.
Dept. 11A
Totowa, New Jersey

Yes . . . I would like my free copy of your new engineering manual on Dick Timing Belt Drives.

NAME.....

POSITION.....

▲ For more details circle NED-252 A on enclosed inquiry slip ▲

LITTELL COIL CRADLES

Plain and Motor Driven — **1 and 2-ton capacities**

COIL CAPACITIES
2,000 to 4,000 pound coils
8" to 24" maximum widths
45" maximum O.D.

Standard motor driven Littell coil cradles feed 600 inches of stock per minute. Also built with Variable Speed Drives for infinite feed range of 100" to 600" per minute.

F. J. LITTELL MACHINE CO. — SERVING USERS OF COIL STOCK — Branches: Detroit Cleveland

Write for Catalog "B"

4169 N. RAVENSWOOD AVE., CHICAGO 13, ILL.

▲ For more details circle NED-253 A on enclosed inquiry slip ▲

MOTORIZED LIFT TRUCK BATTERY CHARGER ELIMINATES SPECIAL WIRING

- No special wiring required.
- Plugs into a standard 15-ampere, 60-cycle, 115 v convenience outlet.
- Long, trouble-free life.
- Convection cooled, requires no maintenance.
- No aging adjustments required.
- Can be wall or battery mounted.
- Fully automatic; portable.
- For all 12-volt hand motorized lift truck batteries, up to 660 A.H.

Write for complete details in Bulletin AR-100.

C&D AutoReg® Silicon Chargers

A PRODUCT OF C&D BATTERIES OF CONSHOHOCKEN, PA. ... ATTICA, IND. DIV. THE ELECTRIC AUTOLITE CO.

Manufacturers of Sizer-Clad® Industrial Batteries • PLASTICELL® • and PLASCOR® Batteries for Communications, Control, and Auxiliary Power • Producers of AutoReg® Silicon Chargers and AutoCel® • Charger-Battery Combinations.

*Trademark

▲ For more details circle NED-254 A on enclosed inquiry slip ▲

Other FLEX-A-PRENE "Firsts"

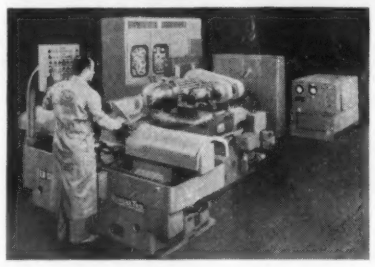
- Lint free — no wicking action.
- All parts non-toxic — non-allergic.
- Self-adjusting — snug-fitting.
- Simply designed for easier filter removal.
- Inside of frames serrated for airtight locking.
- Weighs only 1 ounce.
- Designed for use with goggles or spectacles.
- Only 4 tough long-wearing, interlocking parts.
- Non-irritating plastic frames — unbreakable in normal usage.
- Prenex filter outlasts all throw-away types. Savings pay the cost of a complete mask.

sample $1.50 postpaid
Quantity prices as low as $1.15
Positive Protection Against Pigment Overspray!
(Industrial Prices Only)

FLEXO Products, Inc. Westlake, Ohio

▲ For more details circle NED-255 A on enclosed inquiry slip ▲

CONTOURING MACHINE
tape controlled unit turns, bores, grinds in 0.000025-in. increments

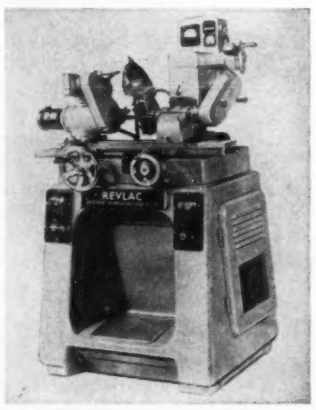


Latest Ex-Cell-O numerically-controlled machine tool, the Numera-Trol 922 contouring machine, will precision turn, bore, or grind under electronic tape or manual control in increments of 0.000025 in. Extremely heavy and rigid machine bed rides on hand scraped slide ways which incorporate precision roller bearings. The 1000-lb cross slide requires only 5½-lb pressure to overcome inertia and only 5 lb to maintain movement.

Machine is operated under constant 72° F to assure production accuracy. Heat from electronic equipment is ducted away from work area, and hydraulic power unit is water cooled. Wheel dressing is performed manually or as a periodic function controlled by tape. Building block design provides interchangeable machining units, one for turning and boring, the other for grinding. • **Ex-Cell-O Corp.**, Industrial Div., 1200 Oakman Blvd., Detroit 32, Mich.

▲ For more details circle NED-256 A on enclosed inquiry slip ▲

SMALL GRINDING MACHINE
makes internal, external grinds with high degree of accuracy



Changing the imported Revlac TriGrinder from chucking or face plate work to work on centers requires only swinging the work head 180 degrees. Mounting of the proper quill is the only change made for internal grinding, while surface grinding is done after swiveling the wheel head 90 degrees and mounting the appropriate magnetic chuck or holding fixture. Infinitely variable speed changes of work head and grinding head are made by rheostat.

Maximum grinding spindle speed exceeds 40,000 rpm. Down feed for surface grinding has coarse and fine settings, the latter in 0.0001-in. increments. Table movement cross feed has similar settings. Finishes of 1 microinch are attainable. Table inclination can be set within 15 sec of arc. The accurate grinder takes work up to 9 in. between centers; table travel is 12 in. • **Russell, Holbrook & Henderson, Inc.**, 292 Madison Ave., New York 17, N. Y.

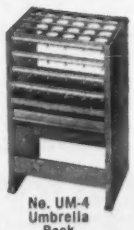
▲ For more details circle NED-257 A on enclosed inquiry slip ▲

The OFFICE VALET® Lockerette

Combines the best features of both lockers and coat racks.

Wraps are exposed to air and light. Employees do not face the weather in damp wraps that have been crumpled in dark lockers—do not eat soggy lunches, soaked by wet hats or gloves. Each person has his own spaced coat hanger, ventilated hat shelf and 12" x 12" x 15" deep lock box for lunches, tools and personal effects. Improves health and morale—lower absenteeism.

Lockerettes save space too . . . the No. 6-12 (2-column) accommodates 12 people in 6 feet; the No. 9-18 (illustrated) accommodates 18 in 9 feet.



No. UM-4 Umbrella Rack

WRITE FOR BULLETIN LO-8

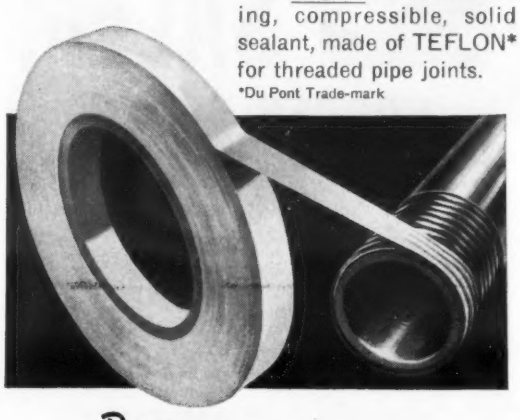
VOGEL-PETERSON CO. Rt. 83 & Madison St. Elmhurst, Illinois

▲ For more details circle NED-258 A on enclosed inquiry slip ▲

• whatever the threaded joint . . . •

NEW PERMACEL® RIBBON DOPE
TRADE-MARK
THREAD SEALANT

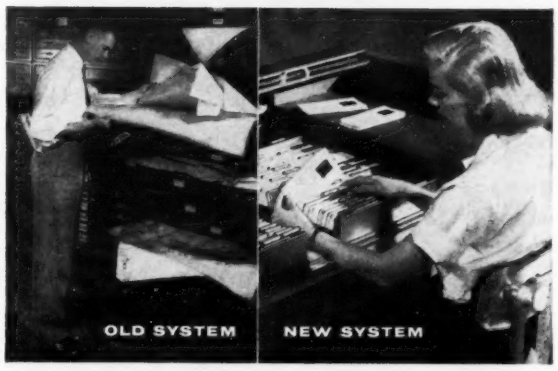
The original self-lubricating, compressible, solid sealant, made of TEFLON* for threaded pipe joints.
*Du Pont Trade-mark



PERMACEL New Brunswick, N.J.
TAPES • ELECTRICAL INSULATING MATERIALS • ADHESIVES

▲ For more details circle NED-259 A on enclosed inquiry slip ▲

thanks to automatic xerography



REDUCE DRAWING-STORAGE SPACE UP TO 95%
Save $20,000 to $100,000 yearly on time, labor, and materials!

How would you like to reduce—by as much as 95%—the storage space you now allot to active and inactive engineering drawings?

In so doing, you'll also reduce time and labor costs dramatically. Savings as high as $100,000 a year can be achieved because of a spectacular breakthrough in storage and reproduction techniques.

This development, called a unitized microfilm system has three basic steps: microfilming original drawings or changes; mounting individual frames into die-cut apertures of data-processing cards; and, from the cards, automatically enlarging the microfilmed drawings by xerography, fast and economically, in a XeroX® Copyflo® 24C continuous printer.

Dry, positive prints, translucent intermediates, or offset paper masters emerge at the rate of 20 feet a minute. They are automatically cut, and ready for immediate use.

The aperture cards, which may be machine-sorted for any combination, are stored in miniature working files, occupying only a tiny fraction of the space required by blueprints, intermediates, or originals.

There is no refiling. The quality of xerographic prints is superbly high, yet they are so inexpensive that engineers are urged to discard them after use.

Unitized microfilm systems offer many other striking economies in time, money, and materials.

PUSH THE BUTTON . . . *and copies flow!*

For complete details, write for booklet X-287

HALOID XEROX INC.
60-204X Haloid St., Rochester 3, N. Y.
BRANCH OFFICES IN PRINCIPAL U. S. AND CANADIAN CITIES
Overseas: Rank-Xerox Limited, London, Eng.

HALOID XEROX®

▲ For more details circle NED-260 A on enclosed inquiry slip ▲

Aluminum FASTENERS

CORROSION FREE

Thousands to Choose From

Screws, nails, bolts, nuts, rivets! Even the specials like escutcheon pins, purlin nails and thumb screws are standard stock items at Whitehead.

Everything you need in Aluminum fasteners from Acorn nuts to Z clips is stocked at Whitehead. Why bother checking around for the manufacturer of a particular type? Call Whitehead and, it's a safe bet it's already stocked for you.

For a quick check for the right fastener in aluminum as well as other principal corrosion resistant metals, use Whitehead's handy wall chart, yours for the asking.

WHITEHEAD METALS, INC.

For more details circle NED-261 A on enclosed inquiry slip

Aluminum WELDING & BRAZING RODS

For Sound reliable joints

Why shop around for Aluminum Welding or Brazing Materials? All the rods or electrodes or fluxes you need to produce sound, reliable welds and joints are in stock at Whitehead. They are made by Alcoa – the world's leading producer of Aluminum, so you know they're top quality.

Standard Alcoa I.G. Electrodes and oxyacetylene filler rods – 100, 4043, 5556 and 5356 – cover the needs of most commercial Aluminum welding. They're in stock in a full range of sizes from 0.030" to 0.187" diameters. Brazing alloys are immedialy available in rod diameters from 1/16" to 3/16", and in sheet thicknesses 0.010" and 0.015".

Write for your free copies of Alcoa's handbooks on "Welding Alcoa Aluminum" or "Brazing Alcoa Aluminum" which give complete information.

WHITEHEAD METALS, INC.

For more details circle NED-262 A on enclosed inquiry slip

Aluminum ABRASIVE TREAD PLATE

MAXIMUM GRIPPING POWER

oily, wet or dry...

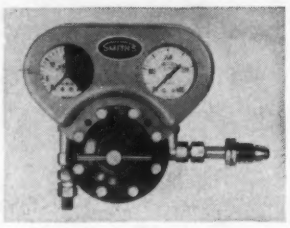
Plant Safety Engineers are finding Aluminum Abrasive Tread Plate the answer to flooring problems. Light in weight and corrosion resistant, they help make a safe, accident-free plant. The abrasive is built right in, making a non-skid plate for maximum gripping power under oily, wet or dry conditions.

They are available in 48" by 144" sheets in three thicknesses – 0.125", 0.190" and 0.250". Write for the illustrated descriptive booklet, which gives additional information as well as installation suggestions.

WHITEHEAD METALS, INC.

For more details circle NED-263 A on enclosed inquiry slip

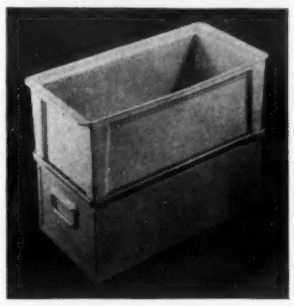
WELDING GAS REGULATOR gages are protected from abuse



Flo-trol on the downstream side of the Saf-T-Pak regulator prevents reverse flow and mixture of welding gases, eliminating the danger of explosion. A safety inlet connector fits the inlet connection to the regulator, making possible quick repair of damaged connections without special tools. The regulator, available for use with oxygen, acetylene, and LP-gases, has a "hard hat" which protects the gages from exterior abuse. • **Smith Welding Equipment Corp.**, 2633 Fourth St. S.E., Minneapolis 14, Minn.

For more details circle NED-264 A on enclosed inquiry slip

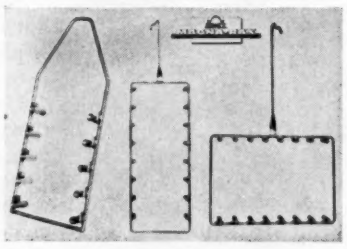
MULTIPURPOSE TOTE BOX molded of glass fiber and resins



Model 538-1 Toteline industrial tote box, made of molded glass fiber and polyester resins, will interstack with existing 10 x 20 x 8-in. size metal containers. Molded handles are an integral part of the one-piece stacking lip. Steel wire reinforced edges add strength and rigidity. Box has a smooth, nonporous, corrosion resistant surface and will not dent or bend out of shape. It is cleaned with hot water or steam. Weight is about 6 lb. • **Molded Fiber Glass Tray Co.**, Linesville, Pa.

For more details circle NED-265 A on enclosed inquiry slip

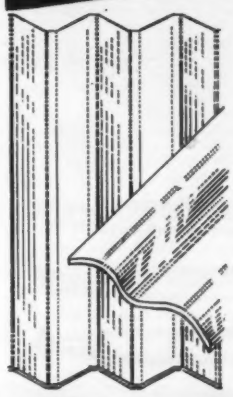
MAGNETIC HANGING RACKS for overhead conveying systems



Employed with overhead or monorail conveying systems, Magna - Rax magnetic hanging racks will hold large or small ferrous parts and stampings for dipping, spray painting, washing, coating, or plating operations. Unit consists of appropriately designed steel frame to which is welded an attaching member of a battery of permanent, double-ended magnets. It adapts to a wide variety of part shapes and sizes. Stainless steel and cadmium plated construction resists rust and oxidizing. Racks can be used in temperatures to 750° F. • **Eriez Mfg. Co.**, 420 Commerce Bldg., Erie 6, Pa.

For more details circle NED-266 A on enclosed inquiry slip

Aluminum CORRUGATED SHEET



MAINTENANCE FREE

your first cost is your last!

First cost is low, and maintenance cost is non-existent when you use Alcoa Aluminum Industrial Corrugated Sheet. These sheets are available in corrosion resistant Alclad providing an attractive, durable sheathing for outbuildings, partitions and main plant construction.

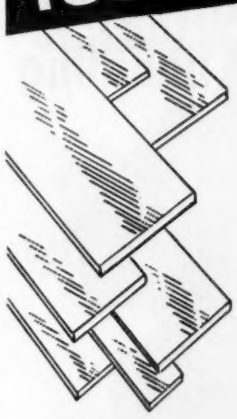
Available in corrugated and V-beam configurations, these sheets are strong. They'll stand up under severe conditions of wind and weather. The corrugated sheets come in 35" and 41⅝" widths and 5' to 16' lengths. V-beam sheets are 41⅛" wide and run from 6' to 18' in length.

Your Whitehead man can give you complete details. Meanwhile, write for a copy of the new Alcoa bulletin which gives specification and installation information.

WHITEHEAD METALS, INC.

For more details circle NED-268 A on enclosed inquiry slip

Aluminum TOOL & JIG PLATE



PRECISION SMOOTH

for many applications

These flat-cast plates of internal soundness with machined surface smoothness on both sides have many varied uses. They're specifically manufactured for Tool & Jig work, stretch-forming dies, fixtures, match plates, low-pressure molds and applications where close thickness tolerances are desirable. And, foundry men say they're tops as core plate.

Thicknesses from 3/8" to 4" are available. Standard size is 48" x 96", but plate may be sawed to meet industrial requirements. Write for the illustrated booklet which gives full details.

WHITEHEAD METALS, INC.

For more details circle NED-269 A on enclosed inquiry slip

LISTEN TO THE WHITEHEAD STORY on

Aluminum ROD, SHEET and TUBE

Just one shopping stop and you get delivery of aluminum in the form and quantity tailored to your fabrication needs.

Read off your shopping list; rods—you get them round, hexagonal, rectangular, square...sheets—you can have hot or cold rolled in a host of alloys...tubes and pipes—come round, rectangular or square. Everything stocked in a wide variety of sizes for you to select from.

Stocks of over 700 sizes of rod, pipe and tube; almost 500 items of sheet; plus thousands of aluminum accessory items make Whitehead a true "Supermarket" of aluminum, no matter what your requirements.

Since we stock all the principal corrosion resistant materials—Copper Alloys, Brass, Bronze, Clad Metals, Stainless Steel, Monel, Inconel and Plastics, too—we can and do give unbiased opinions on the right material to do the job. Anytime you need anything in the corrosion resistant line, you'll find it pays to call Whitehead first.

303 West 10th Street • New York 14, N. Y.

Other Offices and Warehouses:

PHILADELPHIA • BUFFALO • HARRISON, N. J.
CAMBRIDGE, MASS. • SYRACUSE • BALTIMORE
ROCHESTER • WINDSOR, CONN.

WHITEHEAD METALS, INC.

For more details circle NED-267 A on enclosed inquiry slip

BOKUM makes a STANDARD BORING TOOL for EVERY job

You name the job—and regardless of whether or not it is general boring, internal threading, internal chamfering or cutting O-ring grooves—you'll find that Bokum has a boring tool that is standard for that particular operation.

You'll find, too, that Bokum boring and internal threading tools are designed for top accuracy—all cutting and clearance angles (figured by mathematical formula) are designed for the job they are to do. The result is boring tools that give production performance with tool room accuracy throughout their long life.

Bokum boring tools are available in super high speed steel, carbide tipped or solid tungsten carbide. Next time you order—specify Bokum—get maximum accuracy and economy from the same tool.

Dept. T

TRADE MARK REG. U.S. PAT. OFF.

BOKUM TOOL CO. INC.
14775 Wildemere Ave., Detroit 38, Michigan

▲ For more details circle NED-272 A on enclosed inquiry slip ▲

How TOTELINE can cut your costs on parts handling

Improve your handling of small parts and make substantial economies by switching to Toteline tote boxes or trays for handling small parts. Here's how:

- Replace wooden, steel, enameled or fiberboard boxes with Toteline products — made of reinforced molded fiber glass which can't rust, splinter, crack or tear. It's stronger than steel, pound for pound.
- You get a box for handling or storing parts which is light for easy lifting, stacks easily without toppling and lasts indefinitely.
- Boxes and trays can be cleaned by dipping in hot water. There are no corners or crannies for dirt to lodge.
- Toteline trays and boxes, with wire reinforced edges for greater strength, provide resistance to many chemicals (laboratory reports available).
- You eliminate maintenance expense. No re-painting, no chipping or cracking. Toteline products last for years. You don't scrap broken, battered boxes or trays.
- You benefit from constant tare weight.
- Toteline provides exactly the box you want, molded to your specifications.
- Engineering help on material handling problems is available.

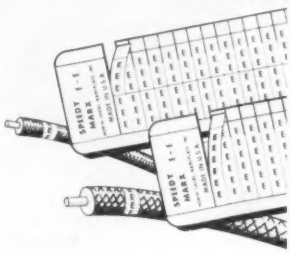
by TOTELINE

MOLDED FIBER GLASS TRAY CO., LINESVILLE, PA.
OFFICES IN PRINCIPAL CITIES AND CANADA
World's Largest Producer of Reinforced Plastic Trays and Tote Boxes

▲ For more details circle NED-273 A on enclosed inquiry slip ▲

VINYL SIGNS & MARKERS
available on quick-release cards

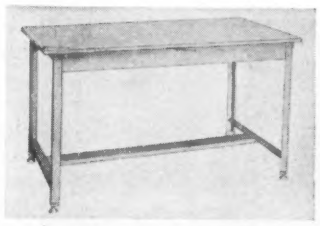
Speedy-Marx pressure-sensitive vinyl cloth signs and markers are easily peeled from quick-release Red Rocket cards for application without distortion. Stocked are standard pipe, wire, and electrical markers; accident prevention signs; numerals and letters; and identification signs. They meet NEMA-ASA specifications and are unaffected by grease, dirt, oil, water, and abrasion. • **North Shore Nameplate Inc.,** 214-27 Northern Blvd., Bayside, N. Y.



▲ For more details circle NED-274 A on enclosed inquiry slip ▲

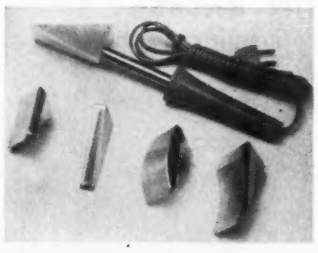
WORKTABLE
5-ft unit has smooth top

Smooth-top worktable for assembly or inspection use has a stringer-supported top and formed foot rest. It is equipped with leveling glides to compensate for uneven floors. The 5 ft by 30-in. top is made of wood-grain pattern, nonglare plastic laminated to multi-ply hardwood core. It is stain and scar resistant and wipes clean with a damp cloth. • **Pollard Bros. Mfg. Co.,** 5504 Northwest Highway, Chicago 30, Ill.



▲ For more details circle NED-275 A on enclosed inquiry slip ▲

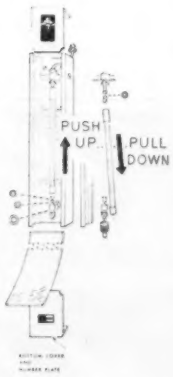
PLASTIC FORMING TOOL
forms, lays-up complex shapes



Forming thermoplastic sheet and laying up Fiberglas cloth over molds to form complex plastic parts are applications for the Plasti-Form electrically heated forming and repair tool. It consists of a heater unit and five quick-change heads for various plastic forming requirements. Sealed unit has a nominal head temperature of 400° F. Additional uses are spot tacking temperature-sensitive tapes and sheets and sealing plastic bags. Price is $14.95. • **ERA Engineering, Inc.,** 1009 Montana Ave., Santa Monica, Calif.

▲ For more details circle NED-276 A on enclosed inquiry slip ▲

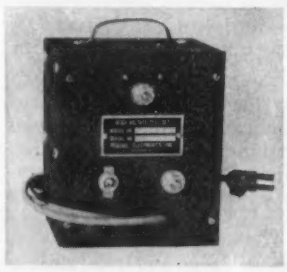
LIQUID LEVEL INDICATOR
features "snap-in" glass column



Cleaning or replacing the glass indicating column of the Petrometer liquid level indicator is quickly performed by snapping it into place without fastening devices. It is held in place at the top and bottom by two receptacles with O-ring seals which fit into the open ends of the tube. The upper receptacle is spring-loaded. • **Petrometer Corp.,** 43-22 Tenth St., Long Island City 1, N. Y.

▲ For more details circle NED-277 A on enclosed inquiry slip ▲

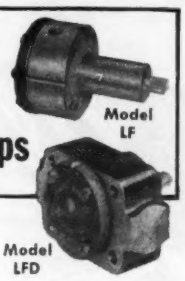
FIXED VOLTAGE TESTER
shows electrical faults of products



Buzzer and panel light indications of breakdown, ground, and shorts in lighting fixtures, appliances, and components are given by this small Model P1AC-S Hipot tester. The 6-lb, 6 x 5 x 4-in. unit operates on 115 v ac and features self-protection and automatic current limited output to protect appliance being tested. Maximum short circuit current is 19 ma. Unit has a fixed output voltage of 900 v rms. Controls are limited to line switch and pilot light. Price is $75. • **Peschel Electronics, Inc.,** R. F. D. 1, Patterson, N. Y.

▲ For more details circle NED-278 A on enclosed inquiry slip ▲

For reliable lubrication at minimum cost TUTHILL cartridge pumps



- **For OEM and plant maintenance**
- **Available from stock**

Tuthill offers a complete selection of cartridge pumps for lubrication applications . . . for original equipment use or maintenance purposes. The compact design of these pumps solves design problems . . . for example, model LF illustrated above measures only 2½" x 4¼" including shaft. Availability from stock and moderate prices make them economically attractive. And Tuthill dependability, proven in thousands of applications, adds to the quality of your product.

Cartridge pumps can be supplied for capacities from 55 to 180 GPH at 1800 RPM. They are available either with Tuthill's special feature which allows them to be driven from a reversing shaft, or for nondirectional surface. Provided with or without shaft seal. May be supplied with internal or external porting or with variations of both internal and external porting. Available with three possible shaft modifications. Write today for complete information. Ask for catalog 108.

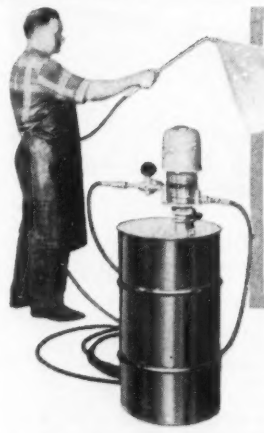
TUTHILL PUMP COMPANY
959 East 95th Street, Chicago 19, Illinois

▲ For more details circle NED-279 A on enclosed inquiry slip ▲

Searching for new and better methods of belt, apron and ribbon maintenance? Looking for a quicker way to fasten belting and making ends meet? Send a sample of your belting, apron or ribbon to Clipper with an outline of your problem. They'll determine the best method of fastening and then *lace your sample free. Write for details.*

Clipper BELT LACER COMPANY
976 Front Ave., N. W., Grand Rapids, Michigan
Ask your Industrial Distributor for Clipper Products

▲ For more details circle NED-280 A on enclosed inquiry slip ▲



Best NEW bet for all INDUSTRIAL CLEANING— low-cost GRACO hydra-clean!

- *Simple . . . one man operation*
- *Flexible . . . fits any container from 15 to 55 gallons*
- *Durable . . . non-corrosive pump, fittings and connections*
- *Economical . . . air-powered pump*
- *High Pressure . . . either 2 to 1 or 5 to 1 ratio*
- *Complete Package . . . ready to operate in your container*

New, low-cost spray wash unit thoroughly cleans machinery, floors, walls, tanks, etc. Combines hydraulic pressure with GRACO "Dirt-Tergent" cleaner or other water soluble detergent . . . loosens and flushes away dirt, grit, grime and scale, *amazingly fast and easy.* Ideal for all general cleaning and preparing surfaces for painting. Get the Hydra-Clean story today!

FREE IDEA BOOK SHOWS GRACO PUMPS FOR EVERY NEED. SEND FOR IT TODAY!

GRACO
17 Graco Square
Minneapolis 13, Minnesota
(See Phone Book Yellow Pages, "SPRAYING," for Graco Suppliers)

▲ For more details circle NED-281 A on enclosed inquiry slip ▲

Interchangeable with all standard JIC cylinders

CHECK THESE 10 POINTS OF T-J SUPERIORITY

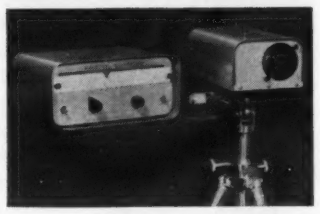
1. One Piece Piston
2. Hard Chrome Cylinder Bore and Piston Rods
3. High Tensile Steel Tie-Rods
4. Cushion Adjusting Screw, Externally Adjustable
5. New Super-Cushion for air, or Self-Aligning Master Seal for Oil (T-J Patents)
6. Solid Steel Heads and Mounting Plates Standard all Models
7. Port Design Allows Minimum Pressure Drop on Inlet or Outlet
8. Chevron Type, Self-Adjusting Rod Packing
9. Piloted Packing Gland—Absolute Alignment
10. Piston Rod, Extra Strong—Polished and Chrome Plated for Efficiency and Protection

Write today to Tomkins-Johnson, Jackson, Michigan, for Bulletin #SQ 10-58 and complete details.

T-J TOMKINS-JOHNSON

▲ For more details circle NED-282 A on enclosed inquiry slip ▲

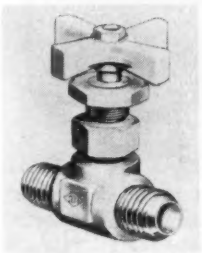
SURFACE HEAT METER
continuously measures at a distance



Surfaces unsuited to ordinary temperature measurement because of motion, location, or possible damage can be continuously measured at a distance by the Industrial Radiometer. A typical area of measurement is 1 in. at a distance of 40 in., with the area increasing roughly with the distance. Temperatures from 120° F upward can be measured. Hotter objects lend themselves to the use of smaller measuring areas. Model shown has a servo drive for the null balance measuring system. Another model has a manual balance. • **Williamson Development Co.**, 317 Main St., West Concord, Mass.

▲ For more details circle NED-285 A on enclosed inquiry slip ▲

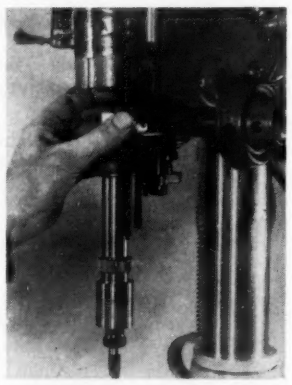
INSTRUMENTATION VALVES
needle type rated 3000 psi



Both inline and angle designs, in brass and stainless steel, are available in the Instru-needle series of miniature needle valves intended for small-line circuitry, instrumentation, gage cut-off, test panel, and manifold uses. Valves are offered in 1/8 and 1/4-in. internal and external pipe sizes, and 1/4 and 3/8-in. OD flared and flareless tube threadings. They are rated for pressures up to 3000 psi and temperatures from −65 to 450° F. • **Republic Mfg. Co.**, 15655 Brookpark Rd., Cleveland 35, Ohio.

▲ For more details circle NED-286 A on enclosed inquiry slip ▲

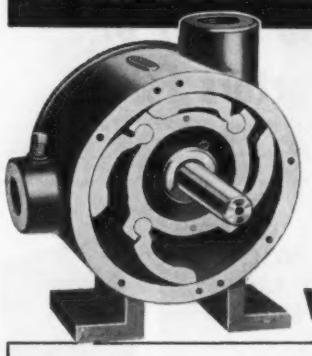
DRILL PRESS DEPTH STOP
for 14 to 21-in. capacity machines



Drills, counterbores, spot facers, taps, and other tools are stopped at a desired depth by the Tri-Mark Multi-Stop drill press attachment. It is used with Tri-Mark or any other quick-change chucks or with multi-spindle indexing drill heads on drill presses with 14 to 21-in. capacities. The tool mounts rigidly and does not interfere with single spindle operation. It has a turret type spool with six threaded stop rods which are color coded for proper selection of tools. Price is $29.75. • **Pacific Tool & Mfg. Co.**, 7912 S. E. Powell Blvd., Portland 6, Oreg.

▲ For more details circle NED-287 A on enclosed inquiry slip ▲

For Vacuum and Pressure Applications



Get these Exclusive Advantages of LEIMAN HINGED VANE DESIGN

- Four curved vanes on easy-action hinges maintain sealed contact with cylinder walls by centrifugal force.
- Cast Iron Vanes and Cylinders hone themselves to hard, glassy smoothness—take up their own negligible wear.
- Extra-large Air Space provides 2 to 3 times more air capacity.
- Minimum Maintenance. Need only periodic oiling. Fewer moving parts, no composition vanes to replace.
- Also quiet operation—smooth air flow—every pump rigidly tested.

LEIMAN Rotary Positive AIR PUMPS

If your machines now use air pumps—if your new designs require air pumps, contact us for engineering assistance and data of Leiman Air Pumps.

WRITE FOR NEW CATALOG plus Application Book showing hookups.

Vacuum to 29.9" Hg.
Pressure to 20 p.s.i.g.
Volume to 162 c.f.m.

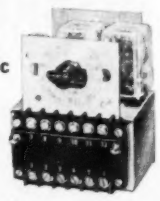
LEIMAN BROS., INC.
167 Christie St., Newark 5, N.J.
Established 1887

▲ For more details circle NED-288 A on enclosed inquiry slip ▲

AUTOMATION COMPONENTS

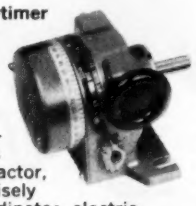
Miniature photoelectric scanner for medium range (5 inches to 12 feet) and for short range (1 inch to 48 inches)

General purpose electronic timer



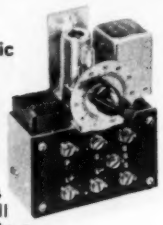
Model 120 seven modes of operation, including repeat cycle timing.

Rototimer



Synchronous contactor, precisely coordinates electric circuits with mechanical systems.

Electronic relay



Model CK picks up impulses too small to operate a mechanical relay directly.

All components available from stock.

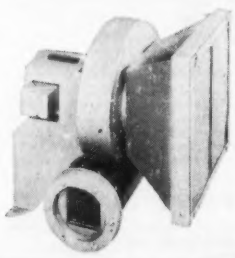
Write for bulletins containing full details.

FARMER ELECTRIC Products Company, Incorporated
2300 WASHINGTON ST. NEWTON LOWER FALLS, MASS.

▲ For more details circle NED-283 A on enclosed inquiry slip ▲

FIRST and FINEST in COMBUSTION

Combustion Air at Less Cost With Eclipse Steel Blowers



Tangible savings on freight charges . . . installed cost . . . operating costs. Excellent performance. Compact. Trouble-free. Inexpensive, efficient, dry-type throwaway filters available.

Consult your Eclipse Combustion Expert — 38 District Offices to Serve You!

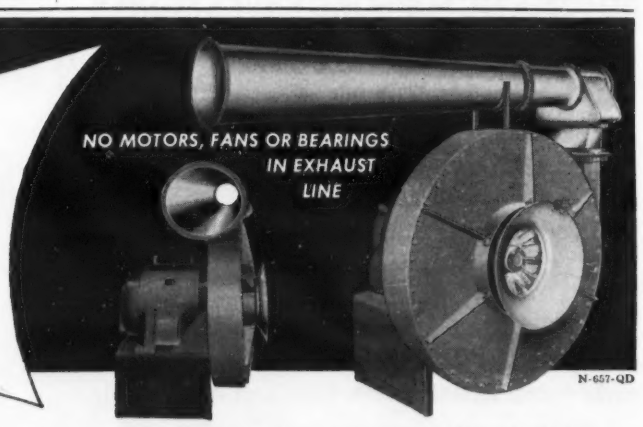
Eclipse Combustion Division

ECLIPSE FUEL ENGINEERING COMPANY
1128 Buchanan Street, Rockford, Illinois

▲ For more details circle NED-289 A on enclosed inquiry slip ▲

Now . . .

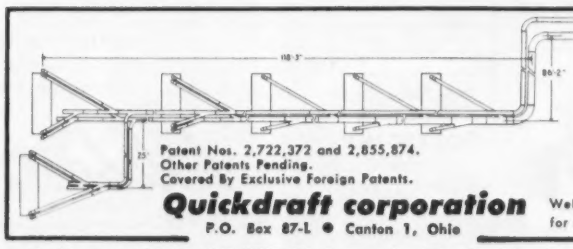
you can reduce bulk materials handling costs with **Quickdraft** high pressure exhausters



FOR MOVING:
Cement, Sand, Iron Oxide, Wheat, Corn, Salt, Limestone, Castor Beans, Knots, Blocks, Paper, Wool, Cotton, Oats, Rags, Rubber, Vegetables, Coal (Powdered), Shavings, Cork, Sawdust . . . **and any other materials that can be moved by air!**

IMPORTANT NOTICE
For resisting abrasive action, Quickdraft units can be rubber lined. For withstanding corrosive gases, all Quickdraft units are available in standard acid resisting vitreous enamel, No. 316 Stainless Steel, rigid plastics (PVC), and with plastic and Fiberglas coatings.

Time and maintenance savings usually pay for Quickdraft high-pressure exhausters in 6 to 18 months on materials handling jobs. Because material does not pass through blower, maintenance is negligible. Downtime for cleaning and replacing fans, motors and bearings is eliminated. Quickdraft units are also ideal for exhausting paint spray, abrasives, corrosive gases, noxious fumes and high temperatures. For Quickdraft engineering data on materials handling, industrial exhausting, heating plant venting, write today!



Patent Nos. 2,722,372 and 2,855,874.
Other Patents Pending.
Covered By Exclusive Foreign Patents.

TYPICAL EXAMPLE: Ideal for moving trim from paper, cellophane and plastic slitting machines. (Models range from 4 in. to 30 in. diameter — with 1/6 to 600 H.P. motors — with negative static pressures from 1/4 in. to 60 in. W.G.)

Quickdraft corporation
P.O. Box 87-L • Canton 1, Ohio

Well known for power draft units for all types of heating plants.

▲ For more details circle NED-284 A on enclosed inquiry slip ▲

WALTON'S *Special Offer gives you a set of* Tap Extractors FREE

A short time ago we introduced our new *"Style B" Tap Extensions.* As part of a continuing program to make these new tools well known to metalworking, we are offering a limited-time SPECIAL:- With each set of (9) "Style B" Tap Extensions bought, we include FREE a set of (6) Tap Extractors. Act before the expiration date for your free sets. No quantity limit.

OFFER POSITIVELY EXPIRES FEB. 29, 1960

Buy this set of nine (9) "Style B" Tap Extensions at regular price. Our newest—for both machine and hand tapping. Metal box included.

Receive FREE this set of six (6) Tap Extractors in sturdy metal box. Walton hand extractors, widely used, remove broken taps easily and quickly.

See Your Industrial Distributor

Or Write for Data ***Folder No. 26***

WALTON TOOLS HARTFORD, CONN. SINCE 1908

THE WALTON CO. HARTFORD 10, CONN.

▲ For more details circle **NED-290 A** on enclosed inquiry slip ▲

Bag your products faster and easier with the Anderson Model 134 Bagger. The stainless steel bag trough will hold up to 200 bags . . . adjusts quickly for bag or open end envelope size. Blower, equipped with air filter, opens bag and keeps it free of foreign matter. Adjusts for height, and will tilt to the most convenient operating position. Quality made, of the finest materials for long life.

LOW in cost

Anderson

Write for Bulletin 1-40 Today
ANDERSON BROS. MFG. CO.
Rockford, Illinois

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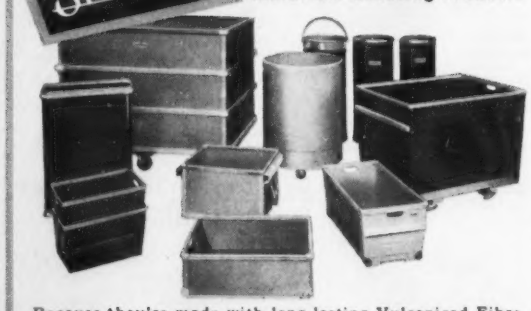
SMOOTH • TOUGH • DURABLE

Spaulding **VULCANIZED FIBRE**
Materials Handling Products



Because they're made with long-lasting Vulcanized Fibre, Spaulding Materials Handling products give longer service, greater wear. What's more, they are lightweight and resistant to water, oils, greases and splintering. Send for the free catalog for complete information on Spaulding's standard and special tote boxes, trucks and barrels.

SEND FOR FREE CATALOG

SPAULDING FIBRE COMPANY, INC.
Dover, New Hampshire

Please send your free catalog of Spaulding Vulcanized Fibre materials handling products.

Name .....

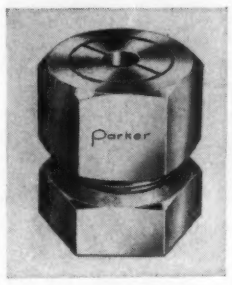
Firm .....

Address .....

City ..... Zone ..... State .....

▲ For more details circle **NED-292 A** on enclosed inquiry slip ▲

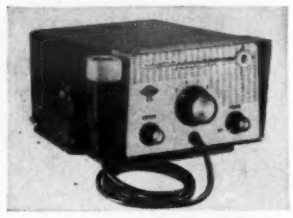
FERRULE SETTING TOOL
for 1/8 to 3/4-in. steel tubing



Presetting of bite-type fitting ferrules onto steel or stainless steel tubing is fast and easy with this collar type Ferulset tool. Only a vise and wrench are needed. It consists of a body-nut assembly and a seat-insert and split-collar assembly. Each fitting size requires its own seat-collar assembly. Tool is made in sizes from 2 through 12, for tubing from 1/8 through 3/4 in. OD. Split collar facilitates removal of tube after presetting the ferrule. • **Parker-Hannifin Corp.**, Parker Fittings & Hose Div., 17325 Euclid Ave., Cleveland 12, Ohio.

▲ For more details circle **NED-293 A** on enclosed inquiry slip ▲

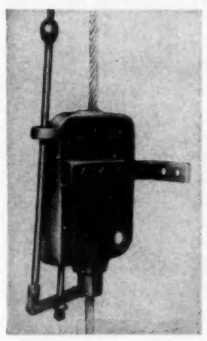
TWO-WAY RADIO
multichannel citizens band unit



Four crystal - controlled channels for both transmitter and receiver of the G-12 Citizens Communicator two-way radio permit operator to switch to other channels if voice traffic is heavy or interference is present. Various stations in a system can also be assigned different channel frequencies. The desired channel is selected by a front-of-panel switch. A press-to-talk switch is on the microphone. The 11-lb, 10 x 7 x 4½-in. unit operates within the 26.965-27.235 megacycle Citizens band. Price with microphone and crystals for one channel is $149.95. • **Young Spring & Wire Corp.**, Gonset Div., 801 S. Main St., Burbank, Calif.

▲ For more details circle **NED-294 A** on enclosed inquiry slip ▲

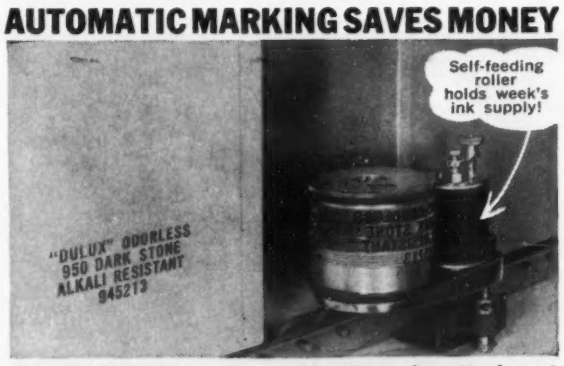
HOIST SAFETY DEVICE
used as hand brake for descent



When used with swing staging, personnel lifts, winches, and hoists, the Blocstop safety device prevents load from slipping or falling. Using Griphoist type self-energizing grip jaws, it can be employed on the hoist cable or an independent safety cable. When used with rope falls, the rope need not be tied when the scaffold has reached the desired height. The Blocstop also functions as a lever type hand brake to control descent. Device is automatic during ascent. Sizes for 5/16, 3/8, and 1/2-in. wire rope are made. • **Griphoist, Inc.**, 744 Harrison St., San Francisco 7, Calif.

▲ For more details circle **NED-295 A** on enclosed inquiry slip ▲

AUTOMATIC MARKING SAVES MONEY



New ROLACODER conveyor and case-sealer attachment marks boxes, cartons, drums, filled bags automatically

Saves on container printing costs . . . eliminates hand-stamping . . . insures faster identification

- Low-cost . . . pays for itself in months
- Compact . . . works by friction . . . requires no troublesome adjustments
- Install it yourself on any conveyor, case-sealer, etc. to mark from side or top
- Not a gadget — beautifully designed and precision-made to give consistently dependable performance, uniform impressions
- Patented type base holds type and dies securely, makes copy changing easy
- Spots imprints accurately in any desired location
- Many thousands in use by all industries

Models to suit every need . . . including twin-action units for marking 2 or 4 sides of cases simultaneously.

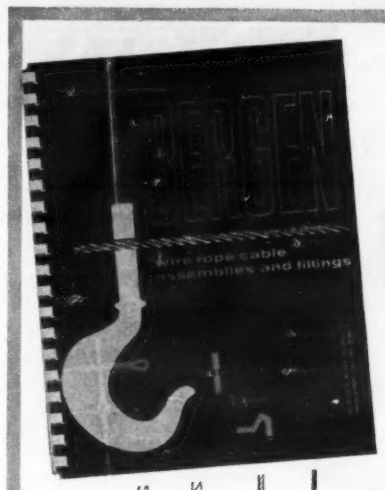
Write today for Bulletin "ROL-3"

First and foremost in automatic production-line CODING, MARKING and IMPRINTING machines. Gottscho®

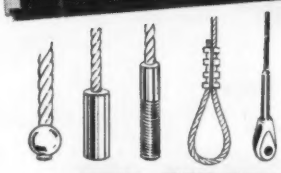
GOTTSCHO
Dept. N
HILLSIDE 5, N. J.

In Canada: Richardson Agencies, Ltd. • Toronto & Montreal

▲ For more details circle **NED-296 A** on enclosed inquiry slip ▲



SAVE VALUABLE DESIGN HOURS *with* **BERGEN's cable assembly catalog**



24 pages of essential wire rope and assembly information . . . drawings dimensions, strengths, materials, for every application. Answers all your design questions.

Send for your free copy of CA-1.

BERGEN WIRE ROPE COMPANY

505 Gregg St., Lodi, N. J.

SPECIALISTS IN THE UNUSUAL

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UTTERLY RIDICULOUS!

He wants to know why $5,000 in equipment was ruined...when for a few pennies it could have been equipped with

S.S.White PLASTIC PLUGS AND CAPS!

Don't let this happen to your customer! S.S. White plastic plugs and caps afford complete protection against damage to vital equipment during handling . . . shipping . . . storage. Remove in an instant, too, and never shred. He'll appreciate your forethought.

And *you* will appreciate their rapid installation that saves hours of production time . . . and, of course, their low cost!

Two lines to choose from:

The quality line – of rigid acetate...tough, non-brittle, impervious to petroleum-base oils and greases, outstanding impact strength.

The economy line – of elastoplastic vinylite . . . a "non-slip grip" for rapid installation and removal, a "stay-put fit."

WRITE FOR FREE BULLETIN
(P5708) and samples
(please state size and type)

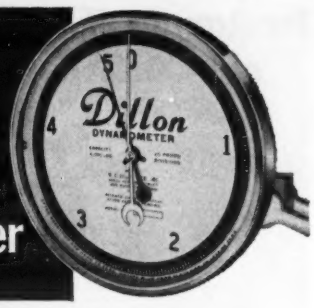
S.S.White PLASTICS DIVISION

1054

Dept. 7P • 10 East 40th Street • New York 16, N.Y.

▲ For more details circle **NED-298 A** on enclosed inquiry slip ▲

Investigate The Portable Dillon Dynamometer



- 13 CAPACITIES: 0-500, 0-1000, 0-2500, 0-3500, 0-5000, 0-10M, 0-15M, 0-20M, 0-30M, 0-40M, 0-50M and 0-100M pounds.
- Choice of dial sizes: 5" or 10" diameter.
- Equipped with attachment shackles and pins.
- Dial protected by shatterproof crystal.
- Will withstand accidental overloads.
- Has max. pointer to register peak loads.
- Extremely compact. Requires little headroom.
- Lightweight yet rugged. Easy to handle.

YOURS FREE!
Profusely illustrated catalog showing applications and prices. Write today!

W. C. Dillon & COMPANY, INC.
14578NE Keswick Street
Van Nuys 1, California
D-26

▲ For more details circle NED-299 A on enclosed inquiry slip ▲

Viking liquid abrasive pumps
NOW LAST LONGER

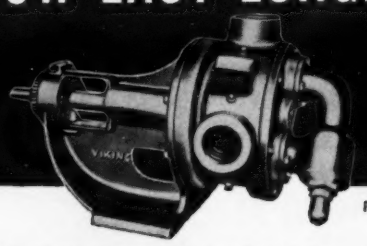


Fig. 64124

Now, you can double or triple pump life with this new heavy-duty Viking. Specially designed with ceramic bearings and mechanical seals to pump paints, inks and other *abrasive liquids. Field tested and proved, pumping liquids from 100 S.S.U. to the heaviest viscous types . . . G.P.M. sizes 3, 6, 12, 16, 25, 40. Let us help you solve your problem.

PLEASE SEND US THIS INFORMATION:
- Liquid to be pumped
- Viscosity of liquid (S.S.U.)
- Percentage and type of solids present in liquid
- Temperature of liquid
- Specific gravity
- Capacity of pump needed
- Suction lift or head
- Discharge pressure

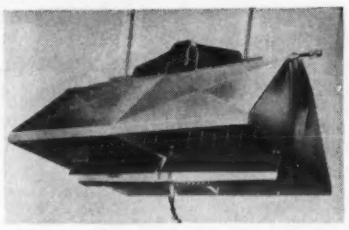
AND ASK FOR BULLETIN SP-507 G

* Consult factory for recommendations on pumping abrasive liquids other than paints or inks.

VIKING PUMP COMPANY
Cedar Falls, Iowa, U.S.A. In Canada, it's "ROTO-KING" Pumps
See Our Catalog In Sweet's Plant Engineer's File

▲ For more details circle NED-300 A on enclosed inquiry slip ▲

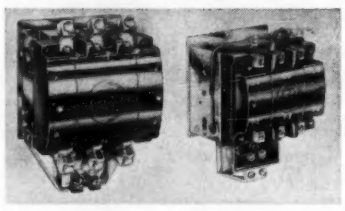
INFRARED HEATERS
with 62,500 and 125,000-Btu inputs



Bright aluminum hoods are featured by Models CRH-63 and CRH-125 gas-fired infrared radiant heaters rated at 62,500 and 125,000 Btu, respectively. Hood concentrates heater output into a dense radiant beam, permitting mounting heights up to 7 ft higher than standard louvered models. Units utilize self-energizing controls and require only hanging, piping, and flue connections. They are AGA-approved for all commercially available gases. • **Bettcher Mfg. Corp.**, Panelbloc Div., 3106 W. 61st St., Cleveland, Ohio.

▲ For more details circle NED-302 A on enclosed inquiry slip ▲

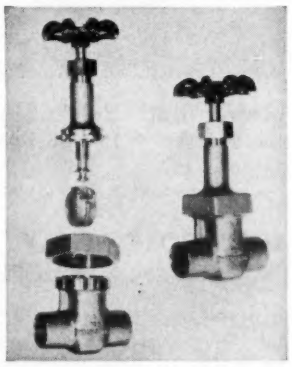
SMALL-SIZE CONTACTORS
equipped with 2, 3, or 4 poles



Type CRA-MH contactors are electrically operated switches that are closed by momentary energization of a coil, then held in the closed position by a mechanical latch. They are made in NEMA Sizes 0 through 5, with 2, 3, or 4 poles and feature straight-through front wiring. Contactors are used in motor control circuits where continuity of an operating sequence must be maintained despite voltage failures, or for control of light or power circuits. A second coil can be remotely operated by pushbutton, float, or pressure switch, or other pilot device to allow the contacts to open by gravity and spring action. • **Arrow-Hart & Hegeman Electric Co.**, Industrial Control Div., 103 Hawthorn St., Hartford 6, Conn.

▲ For more details circle NED-303 A on enclosed inquiry slip ▲

BRONZE GATE VALVE
solder joint, rising stem type



Union bonnet of the 2SJ rising stem bronze gate valve eliminates distortion caused by mechanical strain or temperature changes. Made with a solder joint for use with copper tubing, it has parts which are interchangeable with screwed-end rising stem gate valves. Sizes from 3/8 to 3 in. have a 125-psi rating. • **Walworth Co.**, 750 Third Ave., New York 17, N. Y.

▲ For more details circle NED-304 A on enclosed inquiry slip ▲

PERECO Electric TUBE FURNACE

Available in operating temperatures up to 2800° F.

- Horizontal or vertical models—in Cabinet or Trunnion mounted.
- Selection of tube lengths and diameters.
- Either hollow silicon carbide (tubular) water-cooled element, or ceramic tube surrounded by air-cooled silicon carbide elements.
- Designed for either normal or extremely rapid heat-up.
- Precision controls for wide range temperature control and turndown.
- Interlocked "Fail-Safe" protective devices combined with highest quality unit construction.

Pereco's years of experience and world-wide recognition as electric furnace specialists is assurance of their ability to help you with your requirements. Write.

PERENY EQUIPMENT CO.
Dept. G., 893 Chambers Rd.,
Columbus 12, Ohio

▲ For more details circle NED-305 A on enclosed inquiry slip ▲

Tempilstik°
temperature indicating crayons*

*Also Tempil° Pellets and Tempilaq° (liquid form)

Tempilstik°—a simple and accurate means of determining preheating and stress relieving temperatures in welding operations. Widely used in all heat treating—as well as in hundreds of other heat-dependent processes in industry. Available in 80 different temperature ratings from 113°F to 2500°F . . . $2.00 each.

Send for free sample Tempil° Pellets. State temperature desired . . . Sorry, no sample Tempilstiks°.

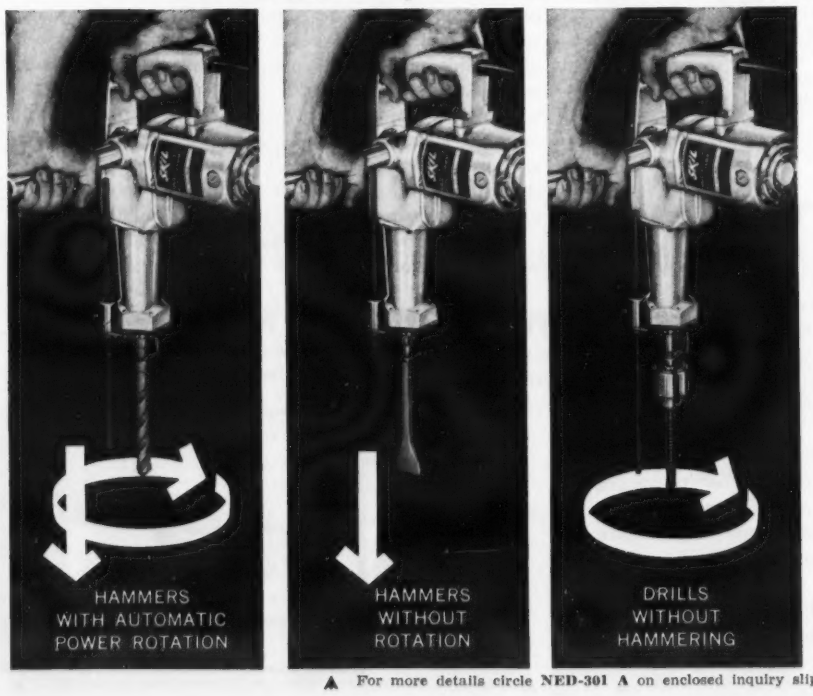
Most industrial and welding supply houses carry Tempilstiks° . . . If yours does not, write for information to:

ADVERTISING DIVISION

Tempil° CORPORATION
132 West 22nd St., New York 11, N. Y.

▲ For more details circle NED-306 A on enclosed inquiry slip ▲

New! Revolutionary Skil Roto-Hammer
With exclusive 3-way action that obsoletes all other electric hammers!



It's actually 3 different tools in one:

Powerful hammer with automatic power rotation that drills holes in masonry up to 65 times faster than by hand . . . up to 5 times faster than ordinary hammers . . . without tiresome rotation of star drills.

Hammer without rotary action for all kinds of hammering jobs, including channeling, routing, chiseling, riveting, demolition work, setting self-drilling anchors.

Drill without hammering action for boring holes in masonry, wood, metal, or any material that can be drilled with standard electric drills.

Costs per hole are lowest of any hammer. Maintenance costs are lowest, too, because of unique "electro-pneumatic" drive.

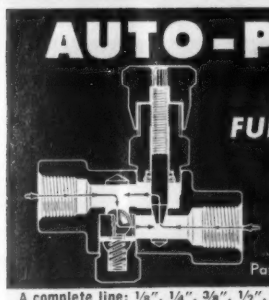
Ask your Skil distributor for demonstration of Model 726 (½-1 inch) and Model 736 (1-2 inch). Or write for 8-page brochure. Skil Corporation, 5033 Elston Ave., Chicago 30, Illinois. Dept. NBT 10.

SKIL ... and SKILSAW POWER TOOLS

▲ For more details circle NED-301 A on enclosed inquiry slip ▲

AUTO-PONENT®

HYDRAULIC FULL FLOW VALVES



Flow Control, Needle, Check, for HYDRAULIC Power

Model KF Flow Control Valve with Dial and Knob adjustment for direct reading and duplicating reference. Now available in Aluminum for 3000 psi.

Pat. #2,841,174

A complete line: 1/8", 1/4", 3/8", 1/2", and 3/4" female Dryseal Pipe Sizes in all models and types. Equivalent Aeronautical Tube Sizes on special order.

MINIMUM PRESSURE DROP AND POWER LOSS . . . Oversize ports and passages give maximum flow at minimum pressure drop, insure greater accuracy and response in hydraulic or large volume air cylinder control.

EASY FLOW ADJUSTMENTS under full pressure. Seal located at port to eliminate air or dirt traps. Gland structure equally effective on pressure or vacuum.

SENSITIVE, CHATTERLESS BALL CHECK . . . Patented design insures rapid ball movement to open or close at low differentials.

FORGED BODIES permit higher pressures with wide safety margins. Aluminum—3000 psi; Steel and Stainless Steel—5,000 psi. Pressure ratings based on better than 5 to 1 safety factor. All internal parts are Stainless. Write for illustrated catalog.

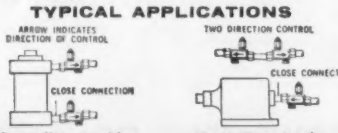
Model F Standard Flow Control Valve or Model N Needle Valve

Model KF Knob and Dial Flow Control Valve or Model KN Needle Valve.

Model PF Knob and Dial Flow Control Valve or Model PN Needle Valve for panel mounting.

Model C Check Valve for In-Line Mounting.

TYPICAL APPLICATIONS



Controlling Double Acting Cylinder — Controlling Single Acting Cylinder

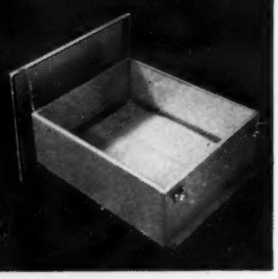
AUTOMATION AUTO-PONENTS INC. COMPONENTS ® 2929 GRANT STREET BELLWOOD (Chicago Suburb) ILLINOIS

▲ For more details circle **NED-311 A** on enclosed inquiry slip ▲

PERFECT PROTECTION— INDOORS OR OUTDOORS

McKINSTRY

JIC electrical wiring boxes



McKinstry totally enclosed JIC Wiring Boxes are especially designed for use on machinery and buildings, indoors or outdoors—wherever seepage of dirt, dust, oil, or water creates a problem.

Manufactured to JIC standards of 16 & 14 gauge bonderized sheet steel with all seams welded.

Cover is held to box with external clamps and hinges and is connected by a chain. External mounting feet are welded to the box. Finish is baked on silver grey hammertone over bonderized sheet steel.

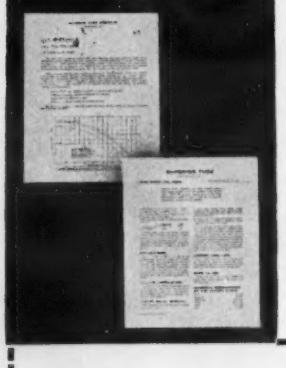
***Write Dept. 20-H** for catalog and price list showing complete line of McKinstry Electrical Boxes, Panel Boards, Wireways and Fittings.*

CMK McKinstry Metal Works, Inc.
285 McKinstry Avenue
CHICOPEE, MASSACHUSETTS

▲ For more details circle **NED-312 A** on enclosed inquiry slip ▲

Tubexperience in action

FREE!



Data Sheets on Tool Steel Tubing and Leaded Carbon Steel Tubing

Here are two data sheets you will want for your files. One gives the properties, advantages, sizes and tempers of Superior Tool Steel Tubing. The other provides similar information on Superior Leaded Carbon Steel Tubing. Just fill in the coupon and mail it today.

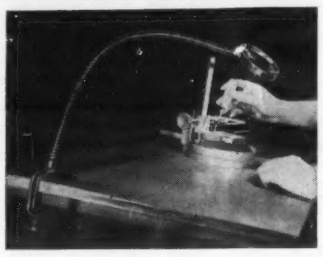
Superior Tube Company
2018 Germantown Ave.
Norristown, Pa.

Please send me my free copy of
☐ Data Memorandum No. 14—Tool Steel Tubing
☐ Data Memorandum No. 24—Leaded Carbon Steel Tubing

Name_____ Title_____
Company_____
Street_____
City_____ Zone_____ State_____

▲ For more details circle **NED-313 A** on enclosed inquiry slip ▲

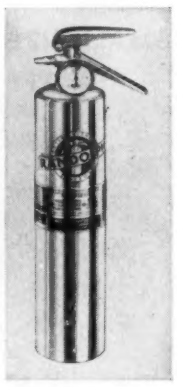
INSPECTION MAGNIFIER
C-clamp holds it on bench or table



Flexible arm-held No. 712 inspection magnifier can be attached to almost any table, desk, or work bench by means of its 2-in. C-clamp. The chrome-plated arm is 24 in. long. Ball swivel allows glass to be tilted to any angle. Lenses are made of clear white optical glass in 3, 3½, and 4-in. sizes. They list for $8, $8.50, and $9, respectively. • **Testrite Instrument Co.**, 135 Monroe St., Newark 5, N. J.

▲ For more details circle **NED-314 A** on enclosed inquiry slip ▲

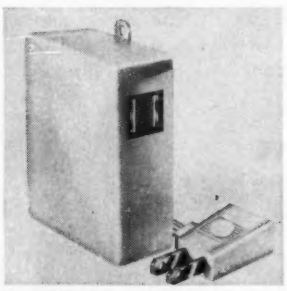
FIRE EXTINGUISHER
UL-approved, dry chemical type



Extinguishing a 10-sq ft fire in 7 sec is possible with the 2½-lb Model V-2½ dry chemical fire extinguisher. The Coast Guard and UL-approved device has a copper and nickel undercoat and polished chrome finish to prevent rusting. Gage-equipped unit is 15 in. high, water and freeze-proof, and is easily filled with air or nitrogen. • **Randolph Laboratories, Inc.**, 1450 Frontage Rd., Northbrook, Ill.

▲ For more details circle **NED-315 A** on enclosed inquiry slip ▲

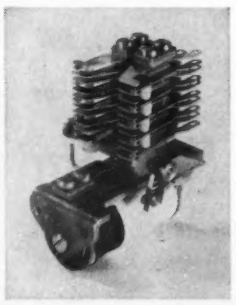
LIGHT CONTROL SWITCH
is 110-125 v photoelectric eye unit



Protect - O - Lite control switch is a photoelectric unit which is activated by presence or absence of light to turn electric power or lights on at night and off at dawn. The compact, 3 x 2½ x 1-in. unit weighs less than 12 oz and is plugged into 110-125-v power outlet with eye facing outside natural light. Switch has 600-w capacity and sells for $14.95. • **Energy Kontrols, Inc.**, 11 S. First St., Geneva, Ill.

▲ For more details circle **NED-316 A** on enclosed inquiry slip ▲

MULTIPOLE RELAY
coils rated to 200-v ac or dc



Bi-stable operation for all contact arrangements is provided by Series 1451 multipole relay which is supplied open, with dust cover, or sealed. Relay is offered with coils up to 200 v ac or dc and with single or bifurcated contacts for dry circuit to 7½ amp. Shown is a 10-pole double-throw unit. Also available are cam-operated program and stepping relays in a wide variety of switching combinations. • **Standard Electromagnetics, Inc.**, Walkersville, Md.

▲ For more details circle **NED-317 A** on enclosed inquiry slip ▲

VACUUM CLEANER
mounts on wall, user's back

Versatile No. 25 heavy-duty vacuum cleaner can be placed on the floor for moving around on metal runners, stood vertically on rubber feet, mounted on wall or pole, or strapped to user's back. Cleaner uses a disposable paper bag inside the regular cloth bag. Entire top can be lifted off for removing the bags. Unit has splash-proof construction and a wire screen over the motor housing to protect motor from damage by heavy particles drawn through the hose. • **Black & Decker Mfg. Co.**, 762 E. Pennsylvania Ave., Towson 4, Md.

▲ For more details circle **NED-318 A** on enclosed inquiry slip ▲

For Accurate TEMPERATURE RECORDS at MODERATE COST

Use TEMPSCRIBE Recorders

BULB-TYPE (illustrated)—*For recording temperatures at a distance*
BI-METAL TYPE — *For recording temperatures in surrounding air*

- Portable—easily carried. Can be set on flat surface or hung on wall.
- Spring-wound instrument-type clock: 3 standard movements—8 hours, 24 hours or 7 days.
- Instrument measures 4½" x 5½" x 7½"; uses 4¼" diameter charts.
- Chart graduations easy-to-read; spaced uniformly over full range.
- Pen and its actuating components are in door. Doors are completely interchangeable to convert to any temperature range, or from bi-metal type to bulb-type.

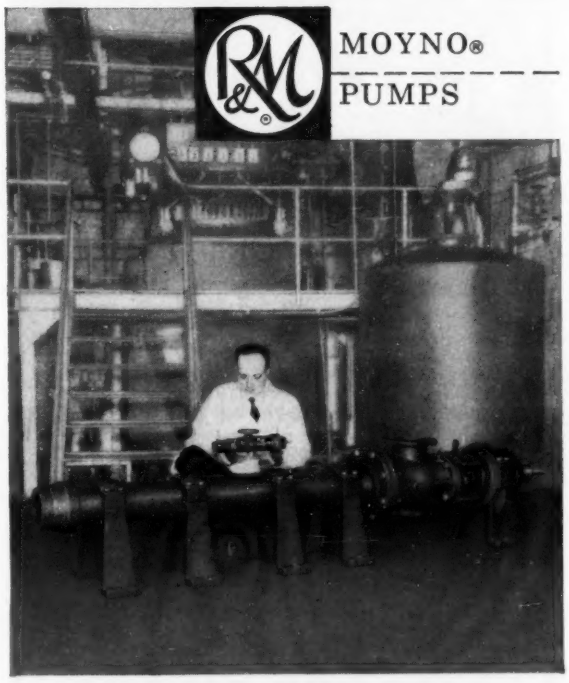
Also available: (1) Interchangeable door with electro-magnetic armature to record running time of motors, burners, solenoid valves, etc. (2) Two-pen doors for recording temperature and electrical operation on same chart.

Write for Leaflets 786 and 872

BACHARACH INDUSTRIAL INSTRUMENT CO.
200 N. BRADDOCK AVE. • PITTSBURGH 8, PA. T-25

▲ For more details circle **NED-319 A** on enclosed inquiry slip ▲

R&M MOYNO® PUMPS



MOYNO® PUMPS

capacities: from 1/100 to 500 gpm
pressures: up to 1000 psi

MOYNO pumps are available in nine sizes with capacities ranging from minimum metering flow to 500 gpm and pressures from zero to 1000 psi. Positive displacement delivers uniform discharge without pulsation, agitation or turbulence. Solutions ranging from thin watery slurry to extremely viscous paste, corrosives, abrasives and even solids in suspension are economically handled without excessive pump wear.

MOYNO's unique *"progressing cavity"* principle with only one moving part and special resistant internal parts slashes pump maintenance costs on problem materials that often ruin other pumps. Almost any substance that can be forced through a pipe can be pumped by a MOYNO.

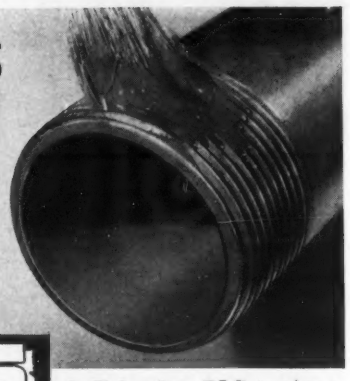
To learn how a MOYNO can cut your pumping costs, write today for Bulletin 30-NE

ROBBINS & MYERS, INC.
motors, household fans, Propellair industrial fans, hoists, Moyno industrial pumps
SPRINGFIELD, OHIO · BRANTFORD, ONTARIO

Cutaway view of Moyno Pump

▲ For more details circle **NED-320 A** on enclosed inquiry slip ▲

IT COSTS LESS TO USE THE BEST!



PLS

1. Takes less PLS to give a perfect seal.

2. One compound for many services: water...oil...gas...steam...chemicals...petroleum products...refrigerants—low and high pressures.

3. Never washes out—one application lasts forever.

4. Never hardens: joints may be easily broken after years of service—no damaged connections.

For your convenience: available in handy 1-lb. brush top cans.

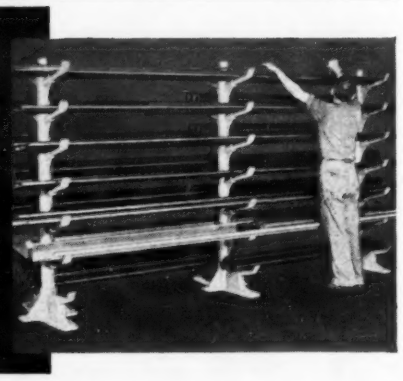
Prove it to yourself. Send for a free sample. Crane Packing Co., 6411 Oakton St., Morton Grove Ill., (Chicago Suburb)

John Crane CRANE PACKING COMPANY

In Canada: Crane Packing Co., Ltd., Hamilton, Ont.

▲ For more details circle NED-321 A on enclosed inquiry slip ▲

SAVE SPACE • SAVE TIME



Store and remove stock quickly—either by hand, fork truck or overhead crane—using the proved Brown Method for efficient storage. Brown Stock Racks, spaced as required, store more in less space . . . reduce handling from a long end haul to a short lateral movement. Stock is quickly visible for fast selection . . . easily accessible from the sides or ends.

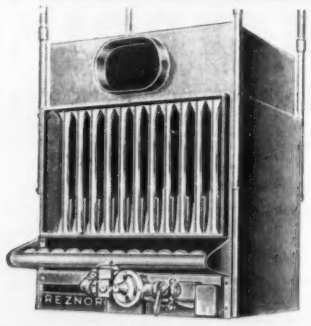
Very low installation costs . . . all components are slip-fitted . . . no bolting or tools needed. Base brackets, trays and other accessories are available to increase usefulness. Both single arm wall racks and double arm racks are available.

Brown Engineering Co., 129 N. 3rd St., Reading, Pa.

■ Get complete data on Quick-Serve Racks. Write today for bulletin.

BROWN FLEXIBLE STOCK RACKS

▲ For more details circle NED-322 A on enclosed inquiry slip ▲



TOUGH BUYERS DEMAND

REZNOR stainless steel DUCT FURNACES

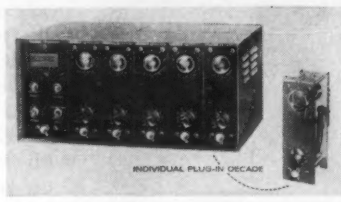
The tough buyer thinks ahead. He worries about possible trouble-makers like corrosion in air-conditioning, make-up or ventilation air systems. That's why he insists on Reznor stainless steel heat exchangers and burners, the kind that *can't* corrode.

Capacities of 50,000 to 300,000 Btu. Use multiples for greater heat requirements. Matching blowers also available. Write for catalog.

REZNOR Manufacturing Co., Dept. 41-E, Mercer, Pa.

▲ For more details circle NED-323 A on enclosed inquiry slip ▲

VERSATILE BATCH COUNTER
uses plug-in sensing devices to perform several functions



Redesigned Tally-Count batch counter uses plug-in sensing devices to perform batch counting, machine cycling, and packaging operations. Double and triple warning preset decades furnish warning signals before the final count is reached, preventing abrupt stops. Photoelectric amplifiers convert photoelectric signals into counting pulses at up to 100 per second.

Photoelectric sensing units count and inspect parts without contacting them. A footage-yardage counter is used in coil winding, roll-fed printing, textile weaving, and other operations. A built-in photoelectric eye feeds counting signals to the Tally-Count for accurate cut-off at any desired length. Basic unit can be remotely reset and controlled, and is offered with up to five decades (100,000 counting capacity) and automatic zero set. • **Standard Instrument Corp.**, 657 Broadway, New York 12, N. Y.

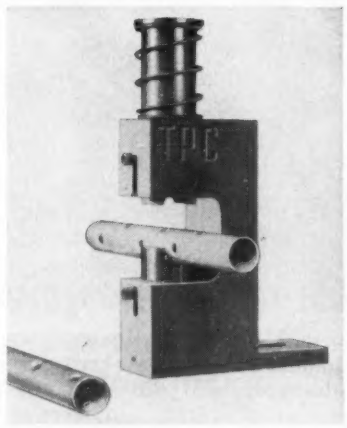
▲ For more details circle NED-324 A on enclosed inquiry slip ▲

HUMIDIFIER
made of reinforced plastic

Area heating costs can be reduced by raising the humidity level with the Kauffman Type A humidifier, a reinforced plastic unit with no moving parts. The 12-in. diameter, 12-in. high unit weighs only 2 lb and dispenses from ½ to 3½ gal of water per hour. Humidity is automatically controlled at any level by a humidistat and solenoid control valve. It mounts in return air duct of warm air heating systems. Price is $85. • **Kauffman Air Conditioning Co.**, 4336 W. Pine Blvd., St. Louis, Mo.

▲ For more details circle NED-325 A on enclosed inquiry slip ▲

TUBE PIERCING UNIT
makes one or two opposed holes



Distortion of tubing during hole piercing operations is held to a minimum by completely enclosing it in this tube piercing unit. The self-contained unit can perforate one hole only, or two opposed holes of the same or different diameters with one press stroke. No mandrel is required. Multiple punching is achieved by arranging any number of the piercing units in a press or press brake. Tube piercer is a semistandard product with component parts stocked ready for machining to specific tubing requirements. Variations accommodate hexagonal, square, oval, and other extruded or rolled shapes. • **Tool Products Corp.**, 377 Old Falls Blvd., North Tonawanda, N. Y.

▲ For more details circle NED-326 A on enclosed inquiry slip ▲

NYLON SCREWS
new sizes added to molded line

Expanded line of molded black nylon screws for subminiature assemblies now includes ¼ and ⅛-in. lengths with 2-56 threads and round heads. Fillister head styles now include 4-40 x ½; 6-32 x ¼, ⅜, and ½; 8-32 x ⅜, ½, and 1½; 10-32 x ⅜, ½, ⅝, and 1½ sizes. All stock lengths have a chamfer and molded lead thread to facilitate starting. They are nonconducting, nonmagnetic, corrosion resistant, and usable over a wide temperature range. • **Weckesser Co.**, Dept. ND-5, 5701 Northwest Highway, Chicago 46, Ill.

▲ For more details circle NED-327 A on enclosed inquiry slip ▲

Allenco WORM GEAR HOSE CLAMPS

A turn or two with a screw driver secures worm gear to bear up under tremendous pressures, squeezes the wide, flat band into a leakproof seal for *any* low or high pressure hose. These acid-and-corrosion-resistant clamps actually outlast high pressure plastic pipe and fittings even when buried underground! Allenco worm gear clamps are available two ways: stainless steel throughout, or stainless steel band and housing with cadmium plated screw in diameters from ⅝ to 7 inches.

W. D. ALLEN Manufacturing Co.
650 South 25th Avenue, Bellwood, Illinois
Allenco . . . quality products since 1887

▲ For more details circle NED-328 A on enclosed inquiry slip ▲

CUT HANDLING COSTS - - - STOCK MORE IN LESS SPACE

LOW-COST, STACKBIN-IN-STACKRACK UNITS PAY FOR THEMSELVES IN 3 WAYS

SAVE SPACE — Individual units stack easily and lock securely as high and as long as you need. Seven different size units available.

SPEED PRODUCTION — Stackbins reduce handling time. Can be used intra-plant in processing, sub-assembly, assembly and stockroom. Roller Bearing Slide Stackracks available for heavier contents. Locking Pallets supplied for unit load handling.

REDUCE INVENTORY TIME — Accessibility of Stackbins for weight count speeds inventory taking; visibility of contents simplifies control.

STACKBIN-IN-STACKRACK COMBINATIONS are made of heavy gauge steel with all welded construction and baked enamel finish.

LOW-COST STACKBIN PRODUCTS ARE SOLD DIRECT — A factory trained, Stackbin Sales Engineer will study your plant requirements, at no obligation, and will make specific recommendations for handling and storage efficiency. Buy only as many units as you need.

WRITE TODAY FOR FULL INFORMATION

STACKBIN CORP. 1081 Main St., Pawtucket, R. I.

Mfd. & sold exclusively in Canada by: Wickware-Stackbin, Ltd., "Perth"

STACKBIN SYSTEM "Stacked and Still Accessible"

▲ For more details circle NED-329 A on enclosed inquiry slip ▲

PUMPS most anything*

THAT POURS!

*A few exceptions. Write for approved list.

Take the risk and waste out of liquid transfer! This rugged Tokheim Hand Pump, with alternate diaphragms, handles most anything from diesel oil to acetates—safely, quickly, without spillage. Eliminates fire hazards and accidents, aids good housekeeping. Accelerates production, too. Pumps 20 gallons per 100 strokes. Get list above from your Tokheim dealer, or write direct today.

General Products Division
TOKHEIM CORPORATION
DESIGNERS AND BUILDERS OF SUPERIOR EQUIPMENT SINCE 1901
1656 Wabash Avenue Fort Wayne 1, Ind.
Subsidiaries: Tokheim N.V., Leiden, Holland—GenPro, Inc., Shelbyville, Ind.
Factory Branch: 475 Ninth Street, San Francisco 3, California
In Canada: Tokheim-Reeder of Canada, Ltd., 205 Yonge St., Toronto, Ont.
For more details circle NED-330 A on enclosed inquiry slip

146 SCREW JACK MODELS TO CHOOSE FROM

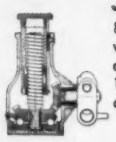
THE WORLD'S MOST COMPLETE LINE!

SIMPLEX SCREW JACKS

SCREW JACKS
4-WAY HEAD—19 MODELS
10 to 24 tons capacity.
Ball bearing, Malleable Housing, Safety peep hole.

RATCHET HEAD—
10 MODELS
20 to 24 tons capacity for close-quarter operation.

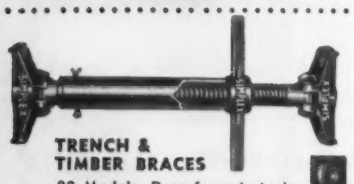
PLANER JACKS —5 MODELS
2 to 8 tons capacity. 2¾" to 7" high. 1" to 4½" Lift. Swivel head & lock screw.



JOURNAL JACKS
8 Models, three with aluminum alloy housings. 15 to 50 tons capacity.

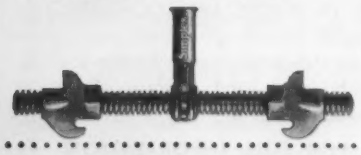
TRAVERSING BASES and TRAVERSING BASE SCREW JACKS
7 Models—10 to 50 tons cap. Vertical & Horizontal travel.

REEL JACKS—
3 MODELS
5 and 15 ton capacity.



TRENCH & TIMBER BRACES
22 Models, Drop-forged steel —1½" & 2" dia. screws. Adapt to any width of trench.

SHORING JACKS
8 Models, Forged Steel. Machine cut screws. 25 & 35 ton cap.



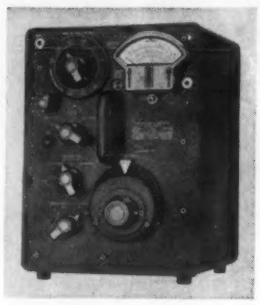
PUSH & PULL JACKS
12 Models
Util-A-Tool—the tool of a thousand uses.

Look for further information on Hydraulic and Lever Jacks in other advertisements.

Other screw types: Steamboat Ratchets & Load Binders, MINE ROOF AND TIMBER JACKS, Rail Puller & Expander, and Gear & Wheel Pullers, Bumper Jacks.

TEMPLETON, KENLY & CO.
2565 Gardner Road • Broadview, Illinois
For more details circle NED-331 A on enclosed inquiry slip

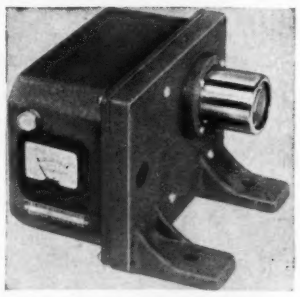
SOUND & VIBRATION ANALYZER
has 2.5 cps to 25 kc range



Continuous (noise) components can be measured as well as line (single frequency) components by the portable Type 1554-A sound and vibration analyzer. It has 2.5 cps to 25 kc range with 10:1 span on each of four ranges. Unit consists of two RC-tuned selective amplifiers which can be either synchronously or stagger-tuned to produce narrow or ⅓-octave bandwidth, respectively. Narrow band is wide enough to embrace small frequency fluctuations from normal variations in speeds of engines and machines. Narrow-band and ⅓-octave response is flat ±2 and 4 db, respectively. All-pass response is flat from 2.5 to 25,000 cps ±2 db. Price is $1060. • **General Radio Co.**, West Concord, Mass.

For more details circle NED-332 A on enclosed inquiry slip

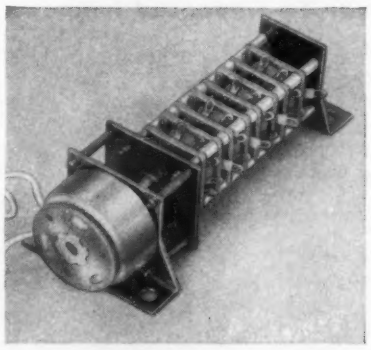
PHOTOELECTRIC CONTROL
has built-in "fail safe" feature



Closed circuit is maintained by the Model A-373 photoelectric control only when the photoelectric current is not less than 7 and not more than 8 ma. Fail-safe action which eliminates the effect of filament burnout, lamp failure, shorting, or defective components is obtained by use of two light-energized plate relays connected in series. Adjustment to the required relay plate current is afforded by a potentiometer. Light beam intensity is also adjustable. Silver cadmium oxide relay contacts are rated at 8 amp, 115 v ac, noninductive. Operation is on 115/230 v, 50-60 cycles. • **Autotron, Inc.**, Box 722D, Danville, Ill.

For more details circle NED-333 A on enclosed inquiry slip

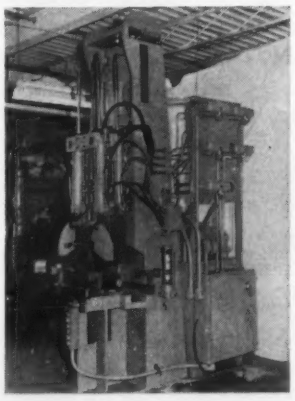
ROTARY SWITCH
miniature solenoid operated unit



Up to five poles, in a tap switch arrangement having 12 taps per pole, can be supplied with the Type MA - 12 - S solenoid operated rotary switch, used for remote control of complex circuits. Ledex solenoid coil has ratings from 6 to 230 v dc. Self-interrupting contacts, as well as suitable rectifiers for alternating current operation, are also available. Power supply, pulsing method, frequency of operation, number of operations, and ratio or energized time to de-energized time are incorporated to specifications. • **Electro Switch Corp.**, 167 King Ave., Weymouth 88, Mass.

For more details circle NED-334 A on enclosed inquiry slip

VERTICAL BENDING MACHINE
shapes up to 2½-in. diameter tubing



The Multiform MV-1 vertical hydraulic production bending machine can be tooled to produce various shapes in tubing with diameters up to 2½ in. Automatic cycle operation is achieved through use of limit switches, relays, and solenoid valves. Powered by a 15-hp motor, bender has a 30-gal pump, 100-gal tank, and the Trabon one-shot lubrication system. Pushbutton control assures two-hand safety. • **J. A. Richards Co.**, 903 N. Pitcher St., Kalamazoo, Mich.

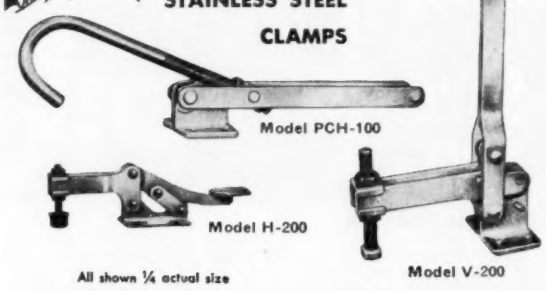
For more details circle NED-335 A on enclosed inquiry slip

Best Grip for Safe Marking

Knurled, wedge-shaped grip permits clear, deep impressions with the ultimate in safety. For maximum strength, non-spalling and non-mushrooming features, this is machined from a solid bar of Mecco Safety Steel. Made in a wide variety of sizes and capacities.
Write for Bulletin 514.

Mecco SAFETY Wedge-Grip TYPE HOLDER
A Product of the Marking Device Industry
M. E. CUNNINGHAM CO.
1055 CHATEAU STREET, PITTSBURGH 33, PA.
For more details circle NED-336 A on enclosed inquiry slip

ELIMINATE BUGABOOS OF CORROSION AND MAGNETISM WITH KNU-VISE STAINLESS STEEL CLAMPS



All shown ¼ actual size

Knu-Vise stainless steel toggle clamps eliminate frustrating magnetic attraction and corrosion while spot welding, or while working near acids.

The complete stainless steel line contains 18 clamps with either horizontal, vertical, or T-style handles. There are types for side mounting and pull clamps as well. Write today for complete information. A standard or a special Knu-Vise clamp will probably be the answer to your application.

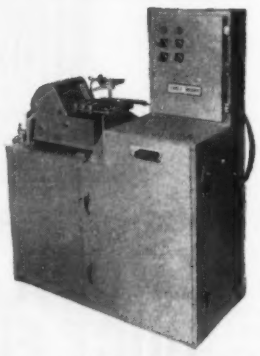
Manufacturers of over 150 models of manually and air-operated clamps and pliers
KNU-VISE PRODUCTS LAPEER MANUFACTURING CO.
3062 DAVISON ROAD
LAPEER, MICHIGAN
WESTERN DIV.: PECK and LEWIS CORPORATION 4436 Long Beach Ave., Los Angeles 58, Calif., ADams 3-7146
CANADIAN DIV.: HIGGINSON EQUIP. SALES LTD. 1131 Pettit Road, Burlington, Ontario
For more details circle NED-337 A on enclosed inquiry slip

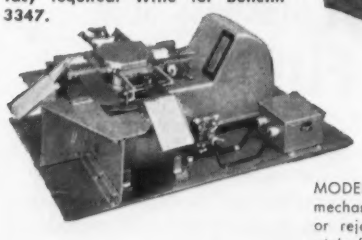
SELECTROL®

AUTOMATIC CHECKWEIGHERS

These Exact Weight Automatic Checkweighing Machines have very high sensitivity—capable of proving weight accuracies in the range of 1 part in 5,000 to 1 part in 20,000.

Transfer mechanism places commodity on, and removes it from the scale. Machines weigh, classify and sort. Operating speed is up to 60 weighings per minute depending on capacity and accuracy required. Write for Bulletin 3347.



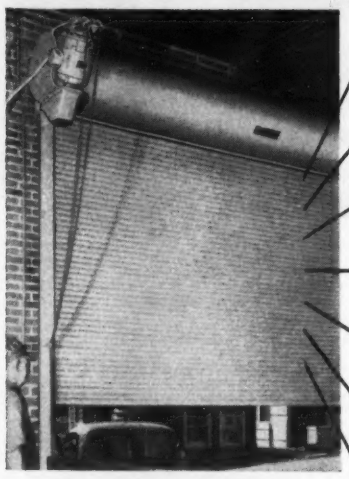


MODEL 145 has in-line "walking deck" type transfer mechanism.

MODEL 144 has rotary transfer mechanism. Automatic selection or rejection is provided immediately following the weigh station.

THE EXACT WEIGHT SCALE CO.
930 W. FIFTH AVE., COLUMBUS 8, OHIO
In Canada: 5 Six Points Road, Toronto 18, Ont.
BETTER QUALITY CONTROL...BETTER COST CONTROL
For more details circle NED-338 A on enclosed inquiry slip

Kinnear Rolling Doors



Door rises straight upward—completely out of the way.

Clears the entire opening, stays out of reach of damage.

All ceiling space is clear—for hoists, conveyors, ducts, etc.

Steel jambs anchor curtain against wind or storm damage.

Rugged, all-metal resistance to fire, storm or intrusion.

All floor and wall space around door always fully usable.

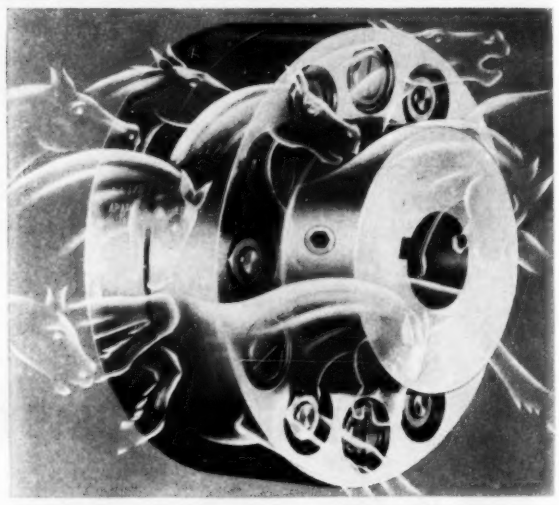
Built to fit any opening—for manual or motor operation.

The KINNEAR Mfg. Co.
FACTORIES:
3017 Fields Ave., Columbus, Ohio
1742 Yosemite Avenue, San Francisco 24, Calif.
Offices and Agents in All Principal Cities

Write for the new Kinnear catalog.

SAVING WAYS in DOORWAYS
KINNEAR ROLLING DOORS

▲ For more details circle NED-339 A on enclosed inquiry slip ▲



REMEMBER ALL THE HORSEPOWER GOES THROUGH THE COUPLING

It costs far less to safeguard working parts than today's high cost of repairs and shutdowns! Complete line of types and sizes, phone or write for catalog.

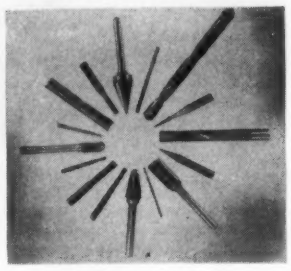
AJAX

AJAX FLEXIBLE COUPLING CO. INC.

142 Portage Road, Westfield, N. Y.
In Canada—The Alexander Fleck Limited, Ottawa

▲ For more details circle NED-340 A on enclosed inquiry slip ▲

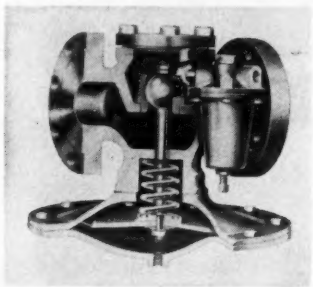
CARBIDE FLUTED TOOLS
burs, grinders, reamers, and drills



Added to recently announced line of end mills are several solid carbide fluted tools. Line includes up to ½-in. diameter burs; internal grinding tools up to ⅜-in. diameter; 0.090 to 0.360-in. boring tools; straight, right, and left hand spiral fluted reamers in 1/16 to ⅜-in. diameters; flat drills from 3/32 to ½ in.; ⅛ to ½-in. drill and countersink combinations; and standard spiral drills from 1/16 to ½ in., in 60 wire gage sizes. Profiling single flute and two-flute straight router mills complete the line. • **Kennametal Inc.**, Lloyd Avenue, Latrobe, Pa.

▲ For more details circle NED-342 A on enclosed inquiry slip ▲

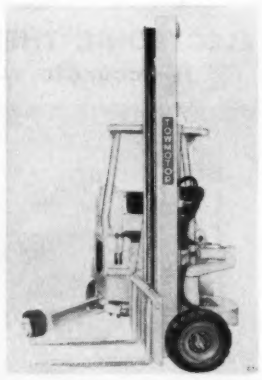
PRESSURE REDUCING VALVE
in sizes from ¾ to 4 in.



Extremely sensitive KP-4 external-pilot operated steam pressure reducing valve features a 440C stainless steel ball inner valve which closes against a Monel seat ring. This combination, reportedly, will withstand wire-drawing effects of steam indefinitely. Valve is made in ¾ to 4-in. sizes with bronze, semisteel, or cast steel body. Screwed ends range in size up to 3 in., whereas flanged bodies are offered in 1¼ to 4-in. sizes. • **Klipfel Valves, Inc.**, 1075 Lincoln Ave., Hamilton, Ohio.

▲ For more details circle NED-343 A on enclosed inquiry slip ▲

FORK LIFT TRUCK
front end pivots in two directions

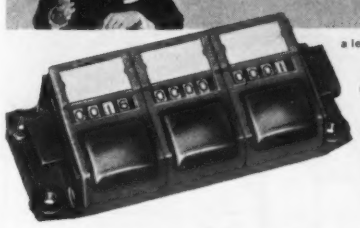


Loads can be angle-stacked in aisles as narrow as 6 ft by the Model 590 fork lift truck. As shown in the photo, the entire front end assembly of the Naro-Aisle-Stack truck can be pivoted 90 degrees in either direction for right or left stacking. Hydraulically-operated outriggers stabilize the truck during pivoting. Wheelbase is 59 in. and capacity is 4000 lb at 24-in. load center. • **Towmotor Corp.**, 1226 E. 152nd St., Cleveland 10, Ohio.

▲ For more details circle NED-344 A on enclosed inquiry slip ▲

"We use VARY TALLY for production, quality and inventory control. It's faster, more accurate, easier to use than any other counting device."

a leading electronics manufacturer



One more use for Versatile
VARY-TALLY
by Veeder-Root

Production, quality and inventory control are not new uses for Vary-Tally but rather time proven ones. However, nearly every day a new use for versatile Vary-Tally is discovered by one industry or another. Among the many ways Vary-Tally is being used are counting rejects or defects; counting sizes, colors, or quantities; attribute sampling and frequency distribution.

Vary-Tally answers for you the many questions of what . . . why . . . how much . . . how many . . . where . . . in what condition. Vary-Tally, made by Veeder-Root, the nation's leading manufacturer of counters and counting devices, is a multiple unit reset counter that counts everything countable.

You can use a Vary-Tally in your business . . . we'll be glad to show you how. Write for complete details.

Veeder-Root
HARTFORD 2, CONNECTICUT
"The Name that Counts"

▲ For more details circle NED-345 A on enclosed inquiry slip ▲

TO IMPROVE PRODUCTION YOU NEED SUCTION

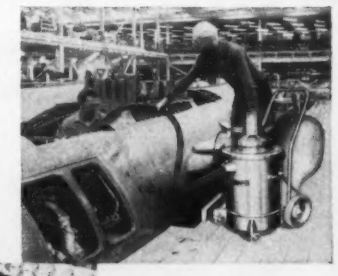
TORNADO VACUUM
THE NO. 1 CHOICE

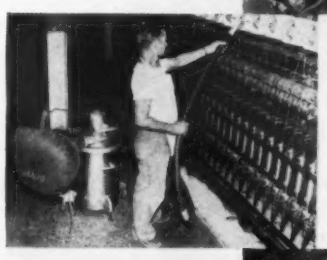
SERIES 400

Smart management is using suction to remove unwanted dirt, chips, and waste from their product. What's more, they know Tornado gets the job done better, faster. It's the vacuum that can be moved quickly to any location for production or maintenance cleaning. Get the facts, write for Tornado bulletin 894-A, today!

CLEAN INTERIORS ON THE LINE

Airplanes, automobiles, appliances — assembly lines move quicker with Tornado at work.





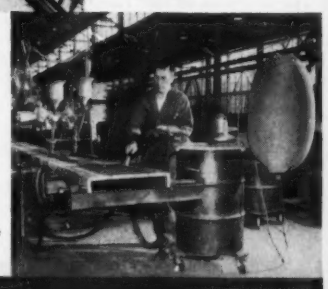
REMOVE PRODUCTION WASTE

Lint and dust are removed while production hustles. Use this same operation with machine tools to reclaim chips for salvage.

RECOVER WELDING FLUX

Production welding flux is expensive, why waste it? Tornado recovers the unused portion for reuse and big savings.

HAVE A FREE SUCTION SURVEY!
Just write and a Tornado expert will call **at your convenience** to show you how to "Improve your production—with suction."

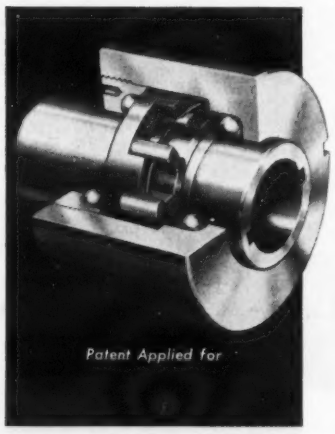


BREUER ELECTRIC MFG. CO.
5116 N. RAVENSWOOD AVENUE • CHICAGO 40, ILLINOIS

▲ For more details circle NED-346 A on enclosed inquiry slip ▲

NEW! DUAL TORQUE-LOCKING & POSITIONING DEVICE

REV-LOK eliminates feedback torque, provides two-directional positioning, drive, over-running and backstopping

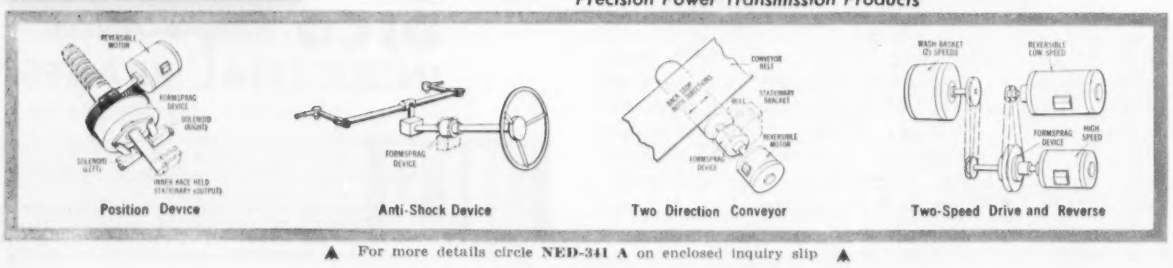


NOW! You can have positive and instantaneous stopping of feedback torque. With this new Formsprag device, simply mount the outer race in a fixed position and the full-complement of sprags will instantly stop feedback by wedging between output member and the outer race — feedback can never reach the input shaft. Yet, design permits transmission of driving torque in either direction from input to output shaft.

When used as a two-directional over-running clutch, output shaft is secured against rotation and clutch outer race is then the output member. Direction of drive, over-running and backstopping is determined by positioning of input shaft.

This versatile device is compact, has higher torque capacity for its size and weight and permits higher over-running speeds than any similar device. Its operation and features are explained in detail in a new technical paper, write for your copy.

FORMSPRAG COMPANY
23595 HOOVER ROAD • DEPT. 105 • WARREN (Detroit), MICHIGAN
Precision Power Transmission Products



▲ For more details circle NED-341 A on enclosed inquiry slip ▲

So many ways the FISHER/MAN can give you a helping hand with the

WIZARD II
PRESSURE CONTROLLERS

- Two Position Controller
- Proportional Controller
- Proportional Controller —Remote Set
- Differential Proportional Controller
- Pressure Transmitter
- Differential Proportional Controller—Remote Set
- Proportional Reset Controller
- Differential Proportional Reset

This "Jack of ALL Trades" is surprisingly low in cost

The partial list of applications at left tells you why the Wizard II is so aptly named. Probably no other controller in the Fisher line is as versatile. Available in brass, steel or stainless steel Bourdon tubes for ranges from 25 to 10,000 psi. Brass or stainless steel bellows available for low pressure service from 30" Hg Vacuum to 30 psi. Write for Bulletin D 4150 A.

IF IT FLOWS THROUGH PIPE ANYWHERE IN THE WORLD . . . CHANCES ARE IT'S CONTROLLED BY . . .
FISHER GOVERNOR COMPANY
Marshalltown, Iowa / Woodstock, Ontario / London, England
CONTINENTAL EQUIPMENT CO. DIVISION, Coraopolis, Pennsylvania
FISHER Controls SINCE 1880

▲ For more details circle NED-349 A on enclosed inquiry slip ▲

BIG POWER-*in a portable package!*

NEW! BEEBE RATCHET-HOISTS

6 MODELS • 12 CAPACITIES
750 Lbs. to 4000 Lbs.

"Snap-On" Quick Reversing Handles

Manufactured by
BEEBE BROS.
The most famous name in hand winches for over 40 years!

Here's a new line of RATCHET-HOISTS backed by the reliable name of BEEBE BROS. • Superior to anything on the market • Simplified design with fewer parts • Extra strength from oversize steel shafts • Cable wind-up handles standard on all models • Triple-hook system standard on all models • Safety handles • Design tested for overload • Warranted 1 year against defective parts.

Ask Your Industrial Distributor About the New Line of Beebe Ratchet-Hoists

BEEBE BROS. *Manufacturing Co.*
2732 Sixth Avenue South • Seattle 4, Wash.
Beebe Winches—strongest geared power for their weight in the world

▲ For more details circle NED-350 A on enclosed inquiry slip ▲

ROLLPIN® SHOP KIT $12.00

The Rollpins in this handy compartmented kit serve the function of taper pins, straight pins, set screws, rivets, dowels, cotter pins, etc. They're slotted, chamfered, tubular spring pins that exert constant pressure against the walls of the holes into which they're driven. They won't loosen even under severe vibration. Over 700 Rollpins; diameters from 1/16" to 1/2"—lengths from 3/16" to 3 1/4".

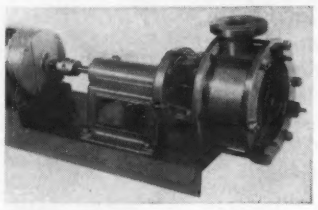
We guarantee you'll find Rollpins the easiest, quickest solution to hundreds of fastening problems in machine, repair and prototype assembly shops.

Send for Rollpin Kit #300 today. Mail check or purchase order for $12.00 (we pay postage). No C.O.D.'s please. Write: Dept. R57-137

ROLLPIN TRADEMARK
ELASTIC STOP NUT CORPORATION OF AMERICA
2330 Vauxhall Rd., Union, New Jersey

▲ For more details circle NED-351 A on enclosed inquiry slip ▲

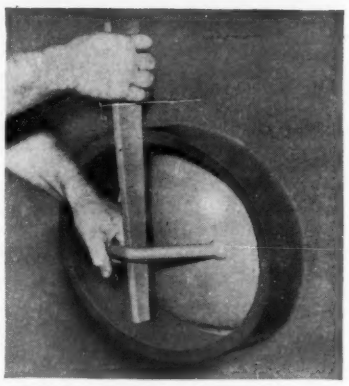
PLASTIC CENTRIFUGAL PUMPS
two sizes deliver 2 to 80 gpm



Model ZP-25 and ZP-35 polypropylene centrifugal pumps rated 2 to 30 and 8 to 80 gpm, respectively, will handle solvents, greases, oils, and many common acids at solution temperatures up to 300° F. Cast iron frame gives added support to the high strength, rigid, mar-resistant plastic casing. Pumped fluid contacts only the facings of rotating and stationary rings, available in Teflon, carbon, ceramic, or Stellite materials. Stainless shaft can be removed from pump in either direction. • **Vanton Pump & Equipment Corp.**, 201 Sweetland Ave., Hillside, N. J.

▲ For more details circle NED-352 A on enclosed inquiry slip ▲

MANWAY ASSEMBLY
consists of ring, cover, key wedge



Single point tension transmitted through two widely spaced points on the cover of this manway assembly assures uniform gasket loading. Simplified unit is easily installed and has only three metal parts. In use, the cover with gasket is positioned in the manway, and the key wedge is inserted between the protruding handle and the outside ring wall. The wedge is tapped lightly until a seal is obtained. Available 11 x 15 and 12 x 16-in. sizes are furnished with standard rings ranging from 1/2 x 3 to 1 x 4 in. • **Lenape Hydraulic Pressing & Forging Co.**, Box 536, West Chester, Pa.

▲ For more details circle NED-353 A on enclosed inquiry slip ▲

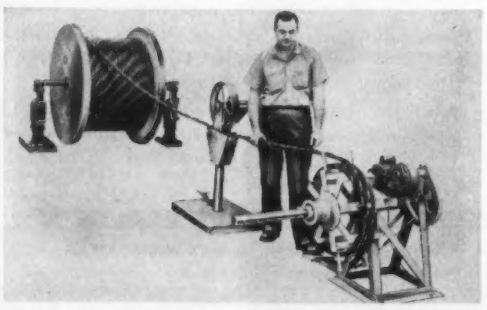
ELECTRONIC THERMOMETER
is accurate within 1½° C

Surface or immersion temperatures in either laboratory, maintenance, or production applications are quickly measured with the Model T-1 precision electric thermometer. This West German instrument is self-contained and portable. Temperatures in the range of −20 to 180° C are accurately determined by applying a handy probe to the surface or immersing it. Probe is connected to the meter by a 30-in. cord. • **Ameresco Inc.**, 7 Center Ave., Little Falls, N. J.

▲ For more details circle NED-354 A on enclosed inquiry slip ▲

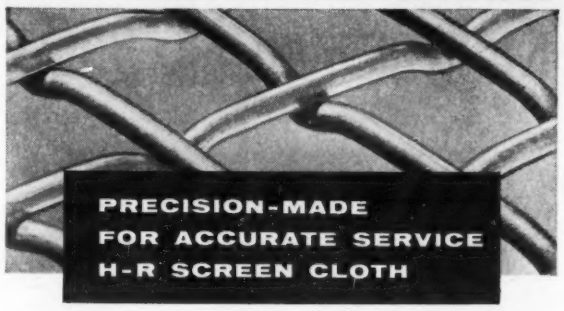
WIRE ROPE REELER-COILER
20-in. head is electrically driven

Enclosed, oil-immersed gear reducer of this heavy duty reeler and coiler provides ample power for handling wire rope from large standard master storage reels. It



is driven by a heavy duty 110/220 v, 60 cycles, single phase capacitor motor with 400 per cent overload rating. Unit has a 20-in. diameter coiling head and a rope speed of 89 ft per minute. Shaft has a 2-in. diameter, and bushings are furnished for 5-in. arbor holes for all reels with diameters to 38 in. and weighing 2500 lb. • **Sherman & Reilly, Inc.**, First & Broad Streets, Chattanooga 2, Tenn.

▲ For more details circle NED-355 A on enclosed inquiry slip ▲



Problem: Inaccurate sizing, blinding, poor output, frequent replacement. Solution: Hewitt-Robins screen cloth made in all popular weaves specifically designed to meet problems on any make of vibrating machinery, of accurate sizing, scalping, flow resistance, tonnage capacity, heavy materials sizing, moisture conditions, plugging or blinding, and others.

Oil tempered Super-Gyraloy, by far the hardest and most abrasion resistant screen cloth wire your money can buy; tough, resilient, spring steel Gyraloy for less excessive abrasion resistance; Super-Gyraloy enamel coated screen cloth for conditions where moisture is a problem; or screen cloths for extraordinary conditions made of steel, brass, stainless steel, phosphor-bronze, monel metal, and other ductile metals, are all available. A wide range of wire and opening sizes permits choice of a screen cloth precision made for your application. To find out how H-R products and services can help you, consult your classified telephone directory for the nearest H-R representative, or contact Hewitt-Robins, Stamford, Connecticut. To obtain your copy of screen cloth bulletin No. 1-14, write to Hewitt-Robins, Stamford, Connecticut.

HEWITT ROBINS

HEWITT-ROBINS

CONVEYOR BELTING AND IDLERS . . . POWER TRANSMISSION DRIVES
INDUSTRIAL HOSE . . . VIBRATING CONVEYORS, SCREENS & SHAKEOUTS

▲ For more details circle NED-356 A on enclosed inquiry slip ▲

HERE'S THE HUB

of the WHEEL INDUSTRY

DICO 5 BOLT

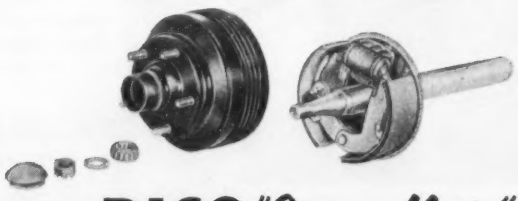
8" - 9" - 12" DEMOUNTABLE **WHEELS**

DICO hubs are designed to meet radial, thrust and torsional loads. The 5-bolt construction of DICO wheels is a proven automotive practice.

ONE HUB FITS ALL WHEELS

4.80/4.00x8	2.50"	Standard Rim
4.80/4.00x8	3.75"	Wide Base Rim
5.00x8	3.75"	Standard Rim
5.70/5.00x8	4.25"	Wide Base Rim
5.50x8	4.25"	Wide Base Rim
6.90/6.00x9	4.00"	Standard Rim
4.80/4.00x12	4.00"	Wide Base Rim
5.30/4.50x12	4.00"	Wide Base Rim
6.00x12	4.00"	Wide Base Rim

. . . and HERE'S THE BRAKE
FOR 8" - 9" - and 12" WHEELS



DICO *"Surg-o-Matic"*
INDUSTRIAL BRAKES

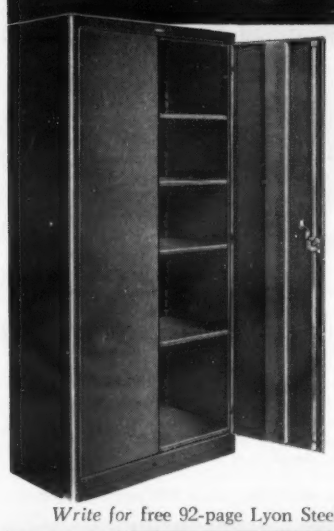
7" Drum with 31 square inches lining surface.

"Surg-o-Matic" self-operating brake actuator incorporated in coupler hitch for Trailer Service. Brakes also supplied for lever operation.

DICO
201 S. W. 16th St., Des Moines 5, Iowa

▲ For more details circle NED-357 A on enclosed inquiry slip ▲

LYON® STORAGE CABINETS



QUALITY FEATURES

- Modern styling—rounded front corners
- Three-point locking device—key lock
- Polished chrome handle

MODEL FOR EVERY NEED

- Shelf style (illustrated)
- Wardrobe type
- Combination wardrobe and shelf model
- Counter and desk-high types

Write for free 92-page Lyon Steel Equipment Catalog

LYON METAL PRODUCTS, INC.
General Offices: 122 Monroe Ave., Aurora, Illinois
Factories in Aurora, Ill., York, Pa. and Los Angeles
Dealers and Branches in all Principal Cities

▲ For more details circle **NED-358 A** on enclosed inquiry slip ▲

Here's the *low-cost answer to chain breakdowns* caused by link-wear, stretch, corrosion and friction. OIL-RITE Chain Oilers feed oil by gravity through solenoid and sight feed valve to brush which rides the chain. Solenoid *starts and stops with driving motor*, making operation automatic, oiling only when chain moves. Drop feeding adjustable. 9 oz. — 1 gal. in capacity with brushes to suit your chains.

GIVE YOUR PLANT ALL THESE BENEFITS!

- Safe, sure chain lubrication
- Reduce chain wear
- Eliminate costly hand oiling
- Cleaner, less hazardous floors

Many styles of Electro and Manual Chain Oilers available. Write for Free Bulletin.

Oil-Rite CORPORATION
2364 WALDO BOULEVARD
MANITOWOC, WISCONSIN

Oil Cups • Dispensers • Oiling Systems • Valves • Oil Gages • Chain Oilers

▲ For more details circle **NED-359 A** on enclosed inquiry slip ▲

LYON® CABINET BENCH

Model No. 3000
(36" w x 24" d x 34" h)

The Cabinet Bench with a Thousand Uses

Heavy steel top • Large enclosed storage area
• Adjustable shelf • Built-in door lock
• Durable green baked-on enamel finish

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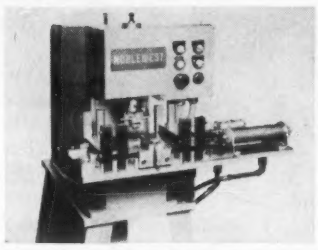
▲ For more details circle **NED-360 A** on enclosed inquiry slip ▲

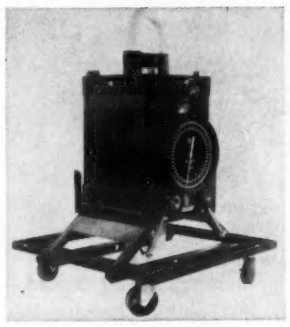
SERIAL NUMBERING PRESS
handles 4500 pieces per hour



Indexing of the consecutive numbering head of Model 531 serial numbering press is by a small air cylinder. The air operated, electrically controlled, automatic machine is capable of numbering 4500 pieces per hour. Nameplates to be numbered are fed one at a time into marking position from a magazine at the right, then fed into an unloading magazine. Magazines can be changed from one plate size to another. Ram pressure is adjustable up to 8 tons. Machine is furnished with all controls, filters, regulators, and switches. • **Noble & Westbrook Mfg. Co.**, Westbrook Street, East Hartford, Conn.

▲ For more details circle **NED-361 A** on enclosed inquiry slip ▲

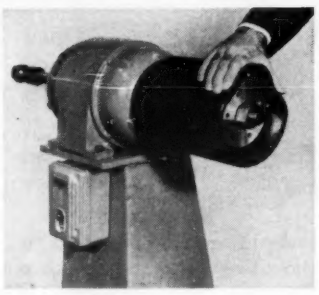
AUXILIARY HOIST CONTROL
positions lifted load to 0.001 in.



Installed as a link between crane hook and load, the Hydra-Set auxiliary hoist control raises or lowers load a distance of 12 in. with accuracy within 0.001 in. It operates independently of crane or hoist system and places accurate load control in hands of operator having personal observation of parts being handled. Fast, accurate load leveling is accomplished safely. Instrument is available in 1, 2½, 5, 10, 20, 50, and 100-ton capacities, with larger models available on special order. • **Mefco Sales & Service, Inc.**, 131 N. Fifth Ave., Arcadia, Calif.

▲ For more details circle **NED-362 A** on enclosed inquiry slip ▲

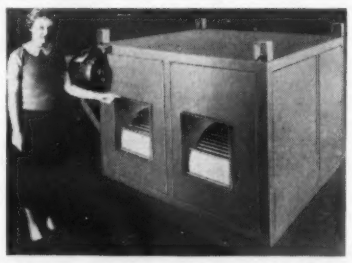
INFLATED SANDING DRUM
takes 9-in. wide abrasive band



Resilience of the Model 890 Valcore air-inflated rubber contact sanding drum allows its abrasive band to follow contours and present a maximum abrasive surface to the work. No part of the core or side plates extends above the abrasive on the 9-in. wide band. The 8-in. diameter drum is leakproof and is fastened to the core without the use of adhesive. All parts are replaceable. Standard bore size is 1¼ in., with larger sizes available. Standard floor-mounted, and adjustable and variable speed drive stands offered may have single or double spindles and operating speeds of 1800 and 1200 rpm. • **Nu-Matic Grinders, Inc.**, 8224 Carnegie Ave., Cleveland 3, Ohio.

▲ For more details circle **NED-363 A** on enclosed inquiry slip ▲

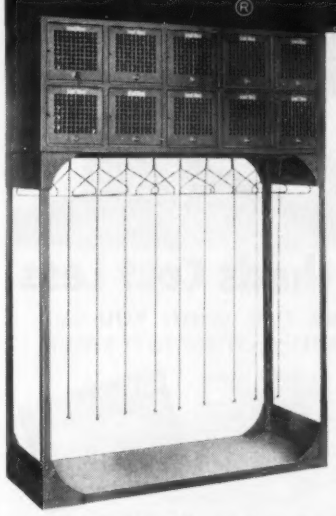
AIR HANDLING UNITS
880 to 47,500-cfm capacities



Discharge direction from 16 models of Halstead & Mitchell air handling units for heating, air conditioning, or ventilating may be horizontal or vertical. They have capacities from 880 to 47,500 cfm and coil face velocities from 400 to 700 fpm, both obtainable under static loads up to 2 in. water gage. Units are usable with direct expansion coils, chilled water, hot water, or steam coils. Face areas range from 2 to 68 sq ft. High or low velocity, cleanable or throw-away filters may be selected. Units have fire, vermin, and waterproof insulation, and can be specified with vibration isolators. Other options are variable pitch sheaves for variable air delivery, forward curved blade centrifugal blowers, and aluminum or copper fins. • **Halstead & Mitchell**, Bessemer Bldg., Pittsburgh 22, Pa.

▲ For more details circle **NED-364 A** on enclosed inquiry slip ▲

LYON® economy Locker Racks



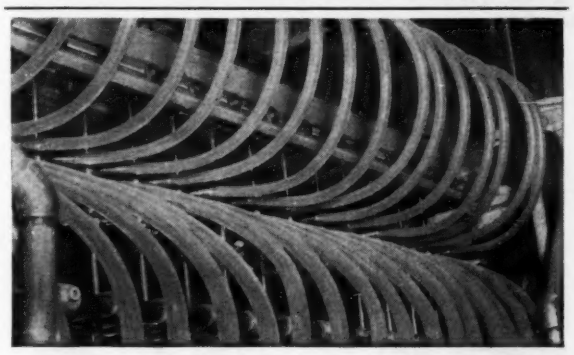
◀ Most practical clothes storage unit wherever floor space is limited and low cost is a "must"

• Storage for ten persons in minimum floor space. Doors have built-in locks. Chain-through-sleeve protects coats against theft.

Write for free 92-page Lyon Steel Equipment Catalog.

LYON METAL PRODUCTS, INC.
General Offices: 122 Monroe Ave., Aurora, Illinois
Factories in Aurora, Ill., York, Pa. and Los Angeles
Dealers and Branches in all Principal Cities

▲ For more details circle **NED-365 A** on enclosed inquiry slip ▲



TYGON® flexible plastic TUBING

- ***Virtually Unlimited Applications***
- ***Quick and Easy to Set-Up***

Tygon Tubing offers a unique combination of advantages. Its glass-like clarity permits visual inspection and control of flow. It resists oils, greases and chemicals. Because of its extreme flexibility, Tygon Tubing can be installed in minutes. Its hard, smooth bore is easily flushed clean. Physically tough and abrasion-resistant, Tygon Tubing provides long, trouble-free service life.

Tygon Tubings are available to handle full vacuums, or braid-reinforced to withstand pressures up to 300 psi. Over 65 sizes are available up to 4" I.D.

440F-1

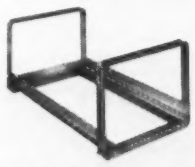
Write for free Bulletin T-100...today!

U. S. STONEWARE
AKRON 9, OHIO

▲ For more details circle **NED-366 A** on enclosed inquiry slip ▲

LYON® SHOP BOXES

Built of steel for lifetime service. A wide variety of standard types and sizes . . . or we will design and build special containers to meet unusual requirements.



STACKING FRAMES (Left) lock together without use of tools. Boxes slide in and out like drawers.

Steel Boxes won't warp, rot, shrink, splinter or absorb oil and grease. Reduce material handling costs . . . substantially!

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General Offices: 122 Monroe Ave., Aurora, Illinois
Factories in Aurora, Ill., York, Pa. and Los Angeles
Dealers and Branches in all Principal Cities

▲ For more details circle **NED-367 A** on enclosed inquiry slip ▲

Modern Methods Cost Less

SAVE MATERIAL AND TIME WHEN YOU CUT PAPER, LEATHER, PLASTICS, OTHER SOFT STOCK

Whatever soft materials you cut, Hobbs-Jacques Hand Shears do the job quickly and accurately in one easy stroke. Even if it's only an occasional operation, modern "engineered cutting" equipment saves the cost of waste materials and time.

Hobbs-Jacques Hand Shears include a complete line for widths 16" to 10'. Bench and table models, with and without gauges.

Write for "Engineered Cutting" brochure. No obligation!

HOBBS MANUFACTURING CO.
EST 1883 41A SALISBURY ST., WORCESTER 5, MASS.
Branch Offices and Representatives in Irvington, N. J., Chicago, Cleveland, Louisville, Greenville, S. C., Los Angeles, Toronto and other Principal Cities

WINDERS
HAND AND POWER SHEARS
DIE PRESSES
SLITTERS

▲ For more details circle **NED-368 A** on enclosed inquiry slip ▲

EQUIP EVERY DEPARTMENT INDIVIDUALLY and TAKE THE LOAD OFF YOUR BLUE PRINT ROOM

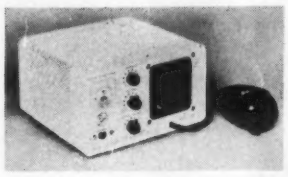
PRICES:
18" $129.50. 27" $149.50. 42" $189.50
Slightly higher, Denver and West f.o.b. Stirling, N. J.

ROTOLITE SALES CORP.
STIRLING, N. J.
Write for folder, using coupon below

ROTOLITE SALES CORP., Stirling, N. J.
Please Send Us Folder on Rotolite.
Name .....
Company .....
Address .....
City .....Zone .....State .....

▲ For more details circle **NED-369 A** on enclosed inquiry slip ▲

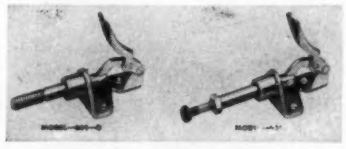
MOBILE RADIOTELEPHONE
short range Citizens Band unit



Any citizen over the age of 18 without any prior radio experience can be licensed to use the D Phone, a short range mobile radiotelephone, by filling out an FCC form. The 5-w Citizens Band unit operates on any two of the 23 available channels in the 26.96 to 27.33 mc frequency band. Effective operating range is 5 to 10 miles. The 8¾ x 5 x 8-in., 10-lb unit features a signal level meter and a superheterodyne circuit with automatic noise limiting and volume control. Push-to-talk microphone, one set of crystals, and instructions are included. Operation is on 12 v dc or 117 v ac. A 6-v dc model is to be offered shortly. • **Kaar Engineering Corp.**, 2995 Middlefield Rd., Palo Alto 6, Calif.

▲ For more details circle **NED-370 A** on enclosed inquiry slip ▲

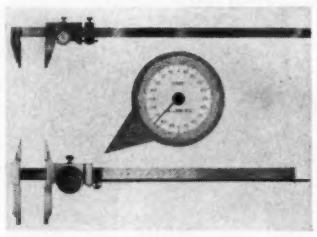
PLUNGER TYPE CLAMPS
lock in two positions



Holding pressure of 95 lb enables two De-Sta-Co plunger type toggle clamps to be used in general purpose work, including light assembly. They lock in either an extended or retracted position and have a ⅝-in. stroke. Model 601 has a tapped hole in the plunger for a rubber-tipped adjustment spindle and a lock nut for adjusting its reach. Model 601-0 has a ¼-20 thread on the plunger end for easy positioning of various holding devices. The ⅝-in. center distance mounting holes fit standard aircraft pegboard assembly plates. • **Detroit Stamping Co.**, 350 Midland Ave., Detroit 3, Mich.

▲ For more details circle **NED-371 A** on enclosed inquiry slip ▲

DIAL READING CALIPERS
6, 8, 12, and 24-in. sizes



Accurate measurements to 0.001 in. can be made on the high visibility, direct reading dial of venier calipers, now offered in 12 and 24-in. sizes, plus the original 6 and 8-in. sizes. All have double jaws for inside, outside, or depth measurements that can be locked in position. The 24-in. size is equipped with a micro-adjusting device. Tools are made of stainless steel and brass with enclosed operating components. Prices of the four sizes are $39, $42, $59.80, and $166.30. • **Titan Tool Supply Co.**, 1419 Hertel Ave., Buffalo 16, N. Y.

▲ For more details circle **NED-372 A** on enclosed inquiry slip ▲

SILVER PLATING
"ON THE JOB" WITH POWDER

Cool-Amp Silver Plating Powder deposits a genuine coat of silver that will not peel off, and will provide lasting protection against oxidation. It has been used extensively and is accepted as equal to electroplating for bolted and stationary contacts.

REDUCES MAINTENANCE SAVES ELECTRICITY

Cool-Amp minimizes overheating and provides cool maximum conductivity for your copper, brass or bronze contacts. Used on all current carrying connections, Cool-Amp silver plating assures long life and low maintenance and will prevent series of losses from oxidation that are too small to create noticeable heat but still accumulate into major power loss. Apply to fuse clips and blades to reduce overheating.

Cool-Amp contains no cyanide and is simple to apply. It can be used by any number of people at the same time ON THE JOB in underground vaults, sub-stations and hard-to-get-at places. The only equipment needed is a sharp steel wire brush or abrasive cloth, clean rag and water.

One pound will silver plate approximately 6,000 square inches.

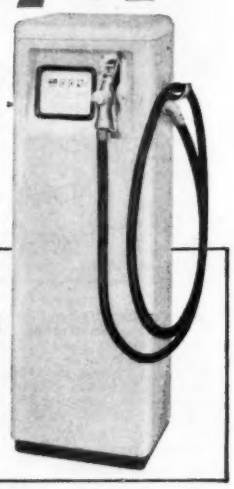
$13.50 PER POUND—SHIPPED PREPAID
WRITE FOR FREE SAMPLE AND QUANTITY QUOTATIONS

The COOL-AMP Co.
Dept. E D—8603 S. W. 17th Avenue—Portland, Oregon

▲ For more details circle **NED-374 A** on enclosed inquiry slip ▲

3·WAY FUELING ECONOMY

Fleet Jr.



1 Accurate fuel cost control
2 Faster, safer refueling
3 Padlock provision ends pilferage

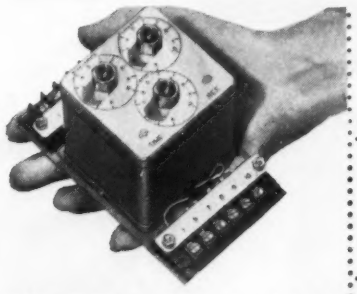
Direct drive rotary vane pump, built-in strainer and check and by-pass valve make Fleet Jr. pumps surprisingly inexpensive to operate and maintain.

JOHN WOOD COMPANY
BENNETT PUMP DIVISION • MUSKEGON, MICHIGAN
IN CANADA: JOHN WOOD COMPANY LIMITED
Toronto • Montreal • Winnipeg • Vancouver

▲ For more details circle **NED-375 A** on enclosed inquiry slip ▲

NEW STATIC-POWERED TRANSISTORIZED REGULATOR MODULES

Now "engineer" complete regulating systems with the economical, time-saving "building-block" method using the new Cutler-Hammer Regulator Modules. Static-powered, transistorized modules are compact and dependable . . . no electronic tubes are used. Front-adjusting potentiometers, and easy-access fuses speed assembly, operation and maintenance. Write today for Publication ED102-A251. Cutler-Hammer Inc., Milwaukee 1, Wisconsin.



TIME REFERENCE—Provides an adjustable linear timed reference signal for acceleration and deceleration of D-c motors. An adjustable timed emergency stop circuit is also included.

COMPARATOR—This adjustable gain amplifier monitors a feedback signal, compares it with a reference input, then generates a corrective output error signal.

CURRENT LIMIT—Designed to protect an armature circuit from over current, this module generates a corrective signal when the current reaches a pre-set limit. Current limit set point and taper are adjustable.

CROSS-OVER—Designed to progressively regulate both the armature voltage and shunt field excitation, the cross-over converts a single input into two output signals.

POWER AMPLIFIER—Amplifies the output voltages from other modules when a stronger signal is required . . . frequently used as a pre-amp to magnetic amplifiers.

POWER SUPPLY—Provides static power conversion of A-c line voltage into two channels of D-c, one to power other modules, the other is used as a regulated reference voltage. Available in several sizes.

REFERENCE REGULATOR—Converts an unregulated D-c input voltage into a regulated output suitable for use as a regulator reference voltage source.

LOW LEVEL CURRENT AMPLIFIER—Adjustable gain amplifier for use with low power signal sources such as self-generating photo cells.

CUTLER-HAMMER CONTROL

CUTLER-HAMMER

Cutler-Hammer Inc., Milwaukee, Wis. • *Division:* Airborne Instruments Laboratory. • *Subsidiary:* Cutler-Hammer International, C. A.
Associates: Canadian Cutler-Hammer, Ltd.; Cutler-Hammer Mexicana, S. A.; Intercontinental Electronics Corporation.

▲ For more details circle **NED-373 A** on enclosed inquiry slip ▲

Now! get complete data on

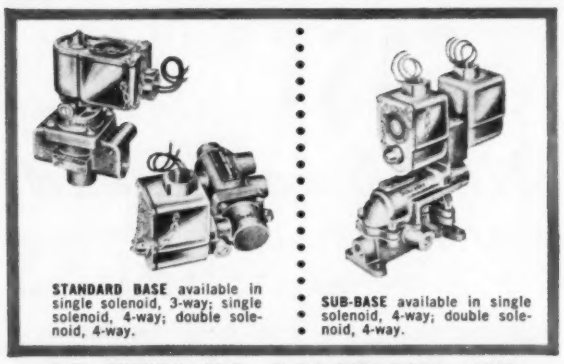
MINIATURE AGASTAT®
time/delay/relays

This free folder contains complete specs on 24 models of the miniature AGASTAT Time Delay Relay for missile, aircraft, computer, electronic and industrial applications. They're small as 1-13/16" x 4-7/16" x 1½", with adjustable timing ranges starting at .030 and as high as 120 seconds.

The folder gives operating and environmental specs, coil data, contact capacities, dimensions, diagrams of contact and wiring arrangements. *Write:* Dept. A33-15.

AGA DIVISION **ELASTIC STOP NUT CORPORATION OF AMERICA**
Elizabeth, New Jersey

▲ For more details circle **NED-376 A** on enclosed inquiry slip ▲



STANDARD BASE available in single solenoid, 3-way; single solenoid, 4-way; double solenoid, 4-way.

SUB-BASE available in single solenoid, 4-way; double solenoid, 4-way.

25 NEW JIC SOLENOID AIR VALVES by SCHRADER
...meet and exceed **JIC** specs

Twenty-five new compact and rugged JIC Solenoid Air Valves have been added to the Schrader line. They are easy to install. Have roomy junction boxes for convenient electrical connections. Can be operated by hand without current in an emergency. Safe, recessed override buttons prevent accidental operation. Fifteen of these new JIC Valves are made with standard base; ten with sub-base.

Write for catalog insert with complete specifications and data on these 5 new Schrader JIC Solenoid Air Valves.

Schrader® a division of SCOVILL
A. SCHRADER'S SON
Division of Scovill Manufacturing Co.
459 Vanderbilt Ave., Brooklyn 38, N. Y.
QUALITY AIR CONTROL PRODUCTS

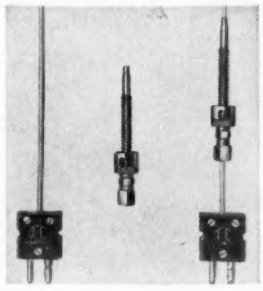
▲ For more details circle **NED-377 A** on enclosed inquiry slip ▲

WORK GLOVES
resist oil, water, and wear

Terri-Cord work gloves will not absorb water or oil to become heavy or soggy. Woven with hundreds of closely knitted loops per square inch, gloves cushion and protect the hand, and are heat and perspiration resistant and cold insulating. Gloves are available in 18, 24, and 32-oz weights in knit-wrist, band-top, gauntlet, and reversible men's and women's styles. They can be washed with little shrinkage. • **Advance Glove Mfg. Co.**, 901 W. Lafayette Blvd., Detroit 26, Mich.

▲ For more details circle **NED-379 A** on enclosed inquiry slip ▲

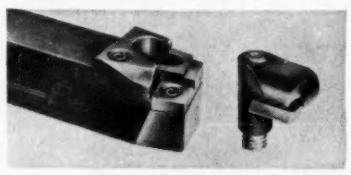
THERMOCOUPLE ADAPTER
allows adjustment to any length



Conversion of a ⅛ or 1/16-in. Ceramo or other metal-sheathed tubular thermocouple to a spring-loaded type is function of this thermocouple adapter. It allows adjustment to any desired immersion length from a 1-in. minimum. The adapter has a stainless steel sheath and cap, Inconel X or stainless steel spring, nickel plated brass compression fitting, and a brass or nylon ferrule. It compensates for expansion, contraction, and vibration by keeping the measuring junction in close contact with the surface being measured. • **Thermo Electric Co.**, Saddle Brook, N. J.

▲ For more details circle **NED-380 A** on enclosed inquiry slip ▲

THROW-AWAY TOOL HOLDER
comprised of only eight parts



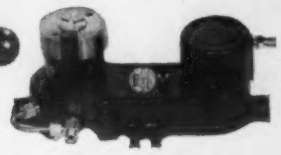
Two major subassemblies, the shank assembly and the chipbreaker and clamp assembly, make up the eight-piece Wesson T-A (throw-away) tool holder. The differential screw not only clamps the insert, but elevates the chipbreaker for insert indexing. The serrated chipbreaker can be reground about six times. Pilot design insures correct realignment of the clamp assembly at all times. Chipbreakers can be adjusted and inserts can be inverted, indexed, or replaced after loosening the screw only one-half turn. Toolholder is available in 112 standard shank styles and sizes for triangular and square inserts. • **Wesson Co.**, 1220 Woodward Heights Blvd., Ferndale 20, Mich.

▲ For more details circle **NED-381 A** on enclosed inquiry slip ▲

REDMER AIR DEVICES...

REDMER INDEX CHUCK

with air operated collet. The REDMER Index Chuck Model No. RC-5 has 12 indexing positions and collet capacity of 1/16" to 2". Uses Brown & Sharpe type collets No. 22 and No. 11.



The REDMER Collet Air Chuck

The REDMER Collet Air Chuck is an air-operated collet holding fixture using Brown & Sharpe type collets. Equipped with air ejection for oil flushing. Capacities 1/16" to 3½".

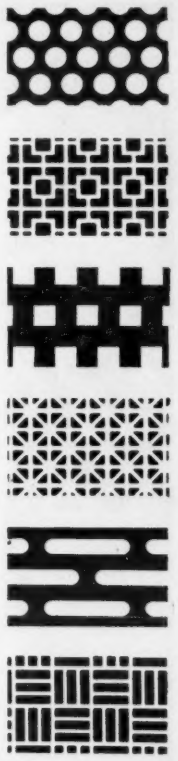
The Redmer Foot Control and Valve

The REDMER Foot Control and Valve reduces operator fatigue in all cases where air control is necessary. Valve is a brass casting useable as a separate unit with cam operations. Foot Control No. FC-28; valve No. V-29.

REDMER AIR DEVICES, Inc.
P. O. Box 12229 1700 — 30th Ave., North
St. Petersburg 33, Florida

▲ For more details circle **NED-383 A** on enclosed inquiry slip ▲

select from the widest range . . . PERFORATED



METALS - PLASTICS FIBRE BOARD
for every purpose

Round, Square, Slotted
Perforated Grille
Louvres
Decorative Metals

Many standard round perforations, grilles and decorator panels in stock for immediate shipment.

NATIONAL PERFORATING CORPORATION
42 Parker Street
Clinton, Massachusetts

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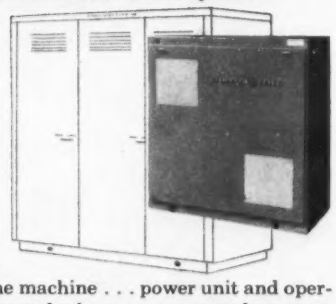
Reliance V★S Drives
more power in 35% less space!



Super 'T' V★S Drives are efficient, integrated units—with a wide range of stepless variable speeds from in-plant a-c. circuits.

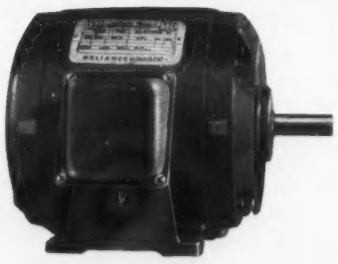
New Super 'T' V★S units are simple to install and maintain. Only the drive motor needs to be placed at the machine . . . power unit and operator's control can be located wherever space and convenience permit. These new units utilize Class B insulation . . . resulting in a more compact package. 100% overloads of one minute duration are accomplished without failure.

WRITE FOR NEW RELIANCE V★S BULLETIN Number D-2506. Gives you complete information. Or call your nearest Reliance Sales Engineer for delivery schedules on full line, 1—350 hp. D-1648

RELIANCE ELECTRIC AND ENGINEERING CO.
241A2 CLEVELAND 17, OHIO
Canadian Division: Toronto, Ontario
Sales Offices and Distributors in Principal Cities

▲ For more details circle **NED-378 A** on enclosed inquiry slip ▲

Duty Master
a brand new A-c. motor



New design gives users better protection from the inside out, simplified lubrication, better response and improved all around performance. The Duty Master a-c. line, from protected to totally-enclosed, explosion-proof, 1 to 250 hp. is ready for delivery *now*.

NEW DUTY MASTER BULLETIN now available with specific information about its advanced engineering qualities and design features. Write for B-2106. B-1646

RELIANCE ELECTRIC AND ENGINEERING CO.
241A CLEVELAND 17, OHIO
Canadian Division: Toronto, Ontario
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Master Gearmotors
matched motor and right angle reducer in one compact power package

Reduce engineering and assembly costs—eliminate separate components with this Master Gearmotor. No high speed couplings, V-belts, chains and sprockets required. Takes up less space—reduces mounting plates and maintenance. Available in ratings from ⅛ to 125 hp. in right angle, parallel or in combination. Wide choice of electrical and mechanical modifications . . . vertical, horizontal flange, and face mountings; output shaft over, under, left or right.

Write for full information, or call your nearest Reliance Sales Engineer. E-1647

RELIANCE ELECTRIC AND ENGINEERING CO.
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A WLS STAMPING SAMPLE FREE...SHOWS YOU HOW MONEY WAS SAVED!

COMPLETE FACILITIES
- Blanking
- Forming
- Piercing
- Drawing
- Extruding
- Stenciling
- Countersinking
- Plating
- Machining
- Painting
- Grinding
- Welding

Send for your free sample of a short run stamping that was produced for a WLS customer. We'll also send you our own latest catalog of parts produced for other customers with data of production costs that represented BIG savings!

WLS Will Lead to Savings!

STAMPING COMPANY

Charter Member of Small Lot Stamping Institute

3287 E. 80th Street • Cleveland 4, Ohio

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DECIMAL REAMERS and COUNTERBORES

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TWENTIETH CENTURY MFG. CO.

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In emergency Telephone Libertyville 2-4200

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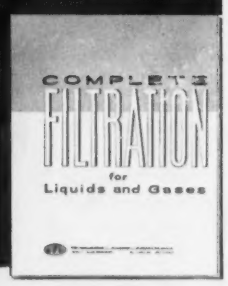
Send for your free copy

"Complete Filtration for Liquids and Gases"



Here, in one condensed catalog, is your guide to CFC Fulflo Filters, Honan-Crane Filters, Delpark and Michiana Filters for continuous micro-clarity of industrial fluids of all kinds: oils; water; liquid chemicals; liquid fuels; acids; alkalis; solvents; salts; compressed air and other gases. Send coupon for your free copy.

COMMERCIAL FILTERS CORPORATION

Dept. NE, 2 Main Street, Melrose, Massachusetts

Please send new condensed catalog on CFC Filters

Name and Title.....

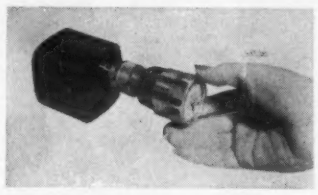
Company.....

Street and Number.....

City and State.....

For more details circle NED-391 A on enclosed inquiry slip

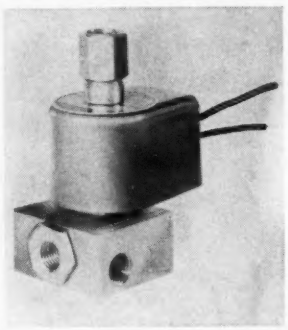
TORQUE GAGE
one and two directional models



"Memory needle" which permits torque readings to be taken in the dark by "remembering" the highest torque applied is a feature of the improved Torque Watch Gage. The needle can be rotated out of the way when not needed or used as a limit. Gage is used by slipping its chuck over any shaft with up to 1/4-in. diameter. Starting and moving torques are read accurately to within ±5 per cent, or to within ±2 per cent on special order. Clockwise, counterclockwise and bidirectional models have 0.005 to 40-oz-in. and 2 to 2400-gram-centimeter ranges. • **Waters Mfg., Inc.**, Wayland, Mass.

For more details circle NED-392 A on enclosed inquiry slip

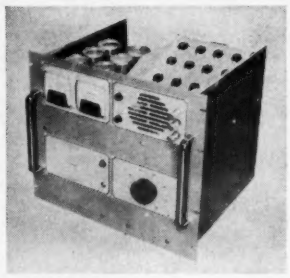
SOLENOID VALVES
have oversize quick-exhaust orifice



Quick exhaust of these Bulletin 8317 three-way solenoid valves is assured by oversized 1/4-in. exhaust orifice. These midget size, direct-action valves have brass bar stock bodies with 1/4-in. N.P.T. connections. Resilient nylon discs assure tight sealing on air, gas, water, and light hydraulic oil up to 160 psi. Only two moving parts are used in the packless design. Normally closed, normally opened, and universal operation are available. Valves are provided in voltages up to 550 v, 60 cycles with general purpose, watertight, or explosionproof solenoid enclosures. • **Automatic Switch Co.**, Hanover Road, Florham Park, N. J.

For more details circle NED-393 A on enclosed inquiry slip

REGULATED POWER SUPPLIES
provide 3 to 36-v dc outputs

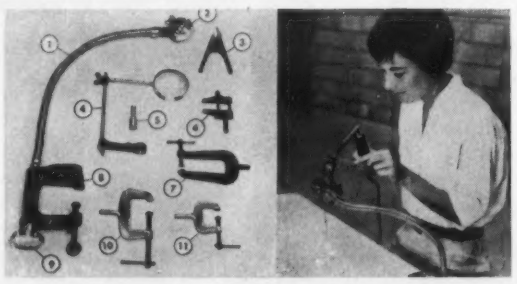


Transistor-magnetic regulated outputs in the 0 to 36-v dc range are provided by Model TR36-30M and TR36-50M Magitran power supplies, rated at 30 and 50 amp, respectively. Other specifications include 105-125-v ac input, line regulation within ±0.05 per cent, load regulation less than 0.1 per cent, and less than 2-mv ripple. Units are protected against intermittent or continuous shorts and recover instantly without fuse changing or resetting of relays. They are intended for either bench or relay rack mounting. Typical unit measures 17 1/2 x 19 x 15 5/8 in. • **Electronic Research Associates, Inc.**, 67 Factory Place, Cedar Grove, N. J.

For more details circle NED-394 A on enclosed inquiry slip

SMALL WORK HOLDER
holds 3-lb piece in any position

Small work pieces weighing up to 3 lb are held rigidly at any angle and any position for welding or soldering by the Handy Hand flexible bench-model posi-

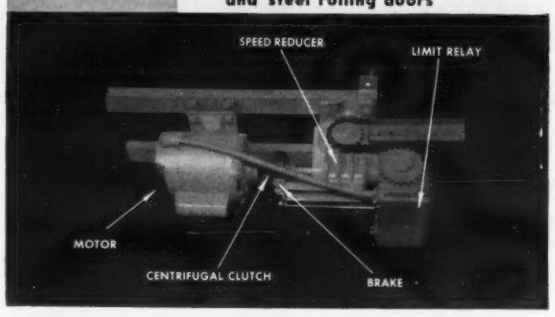


tioner. Aluminum bench clamp fastens to any 2-in. table or bench top. Rotating position head on the end of the flexible shaft accommodates adapters with 1-in. spring clamp, 1-in. C-clamps, bench vises, magnifying glass, and magnetic holders. Other fixtures can be used by attaching a 5/16-in. spud for the revolving head. Unit is priced at $24.90 with one spring and one C-clamp. • **Superior Welding Co.**, 3410 E. 14th St., Los Angeles 23, Calif.

For more details circle NED-395 A on enclosed inquiry slip

THE MARK OF QUALITY BARBER COLMAN

NEW Model LR DOOR OPERATOR
- 1/3 hp motor . . . for doors 240 sq ft, 19 ft 2 in wide
- Low-voltage control standard
- For overhead, full vertical, sliding, and steel rolling doors



Stop in Booth 320 Plant Maint. & Eng. Show Philadelphia Jan. 25-28

still only $230, f.o.b. Rockford — No change in the fine-quality materials and construction of famous instant-reversing Model L, yet with all the above new features, plus enclosed safety switch with Fusetron overload protection. Radio control available. Also, LC Operator with special Safety Switch. Distributor listed under "Doors" in your phone book.

WRITE for Bulletin F5685.

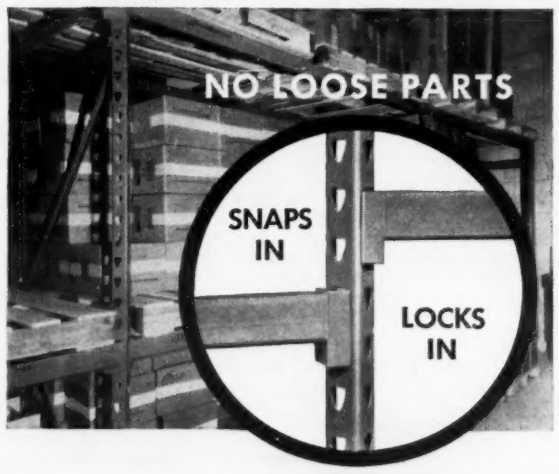
BARBER-COLMAN COMPANY

Dept. S01, Rockford, Illinois

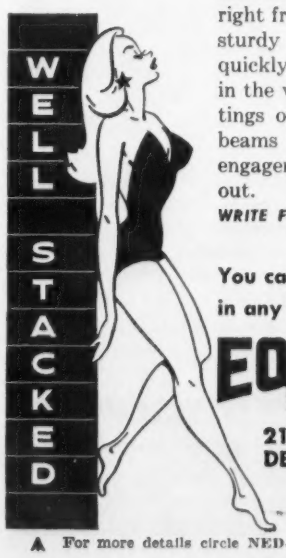
For more details circle NED-396 A on enclosed inquiry slip

FAST!

EMI air-row head FULLY ADJUSTABLE PALLET RACKS



★ EASY TO ERECT
★ ONLY 2 BASIC PARTS
★ SIMPLE TO ADJUST
★ QUICK TO RELOCATE



EMI AIR-ROW Head Racks easily adjust to stack pallets, skids, dies and bulk of varying heights. Upright frames are tied together with sturdy steel support beams which quickly snap into AIR-ROW slots in the vertical post. Forge lock fittings on the ends of the support beams insure positive self-locking engagement with no sway or pop-out.

WRITE FOR OUR COMPLETE CATALOG!

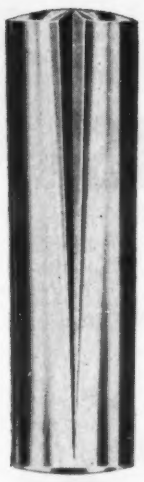
You can stack or ship ANYTHING in any industry on EMI racks

EQUIPMENT MFG. INC.

21566 HOOVER ROAD DETROIT 5, MICHIGAN

For more details circle NED-397 A on enclosed inquiry slip

need DRIV-LOK grooved pins in SPECIAL MATERIALS?



- aluminum
- alloy steel-heat treated
- brass
- stainless-303 and 416
- bronze

DRIV-LOK Pins — the positive locking, solid steel body grooved fasteners — are also available in a variety of special materials to meet particular requirements of strength, corrosion resistance, electrical qualities, or combinations of these properties. Like all DRIV-LOK Pins, they are carefully made to exacting standards, are easy to install and will reduce your fastening and assembly costs.

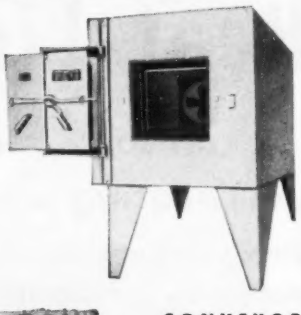
Write us, describing your fastening requirements. Recommendations made and catalog sent without obligation.

DRIV-LOK SALES CORPORATION
717 Park Avenue • Sycamore, Illinois

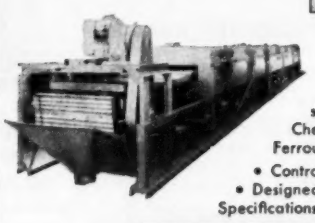
For more details circle NED-398 A on enclosed inquiry slip

ELECTRIC FURNACES

Uniform, *Controlled* Heat to 2700°



ANNEALING FURNACES specially designed for Glass and Steel applications in production and laboratory. Temperature range up to 1400°F.



CONVEYOR FURNACES for Glass Annealing, Baking Resistors, Ceramic Molding, Chemical Drying, Annealing Ferrous and Non-Ferrous Metals.
• Controlled Heat up to 1850°F.!
• Designed and Built to Your Specifications!

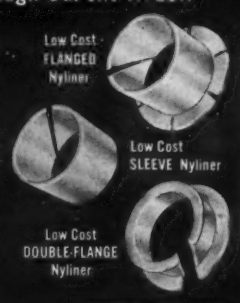
WRITE FOR BULLETIN 75-TC.

TRENT INC.
Electrically Heated Industrial Equipment
251 LEVERINGTON AVE., PHILADELPHIA 27, PA.
In Canada Supreme Power Supplies Limited, Toronto 14

For more details circle NED-399 A on enclosed inquiry slip

THOMSON "Snap-In" **NYLINERS**
—*BEARINGS of smooth, tough DuPont* NYLON

COST less to BUY ...less to INSTALL ELIMINATE LUBRICATION!



Additional Benefits:

- CLOSE FIT
- LONGER LIFE
- EASILY INSTALLED
- LESS SERVICING
- SELF-RETAINING
- RESIST CORROSION
- LOW FRICTION
- RESIST POUNDOUT
- NO FRICTION OXIDATION
- DAMP VIBRATION
- OPERATE IN LIQUIDS
- NON-CONTAMINATING
- INSTANTLY REPLACEABLE
- RESIST ABRASION
- MINIMUM SPACE
- SILENT OPERATION
- LIGHTEST WEIGHT
- REDUCED WEAR

NYLINER Bearings are a highly engineered thin liner of DuPont Nylon, designed to bring bearing users the many benefits of Nylon as a bearing material by solving most of the limitations surrounding its use. The compensation gap principle assures maintenance of diametral tolerances for precision applications.

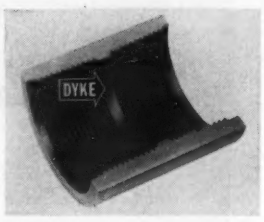
Seven Standard Types available from stock. Write for literature and name of your local representative who stocks NYLINER Bearings for immediate shipment.

THOMSON INDUSTRIES, Inc.
DEPT. 9, MANHASSET, NEW YORK

Also— —Manufacturers of BALL BUSHINGS . . . the Ball Bearing for Linear Motions and 60 CASE . . . Hardened & Ground Steel Shafting

For more details circle NED-400 A on enclosed inquiry slip

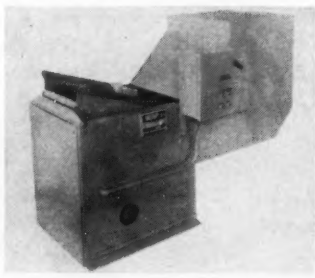
INSULATING PIPE COUPLING
stops corrosion and electrolysis



This glass fiber reinforced epoxy pipe coupling is designed to prevent electrolysis and corrosion where dissimilar metals, stray currents, soil conditions, and chemicals are contributing factors. Suited for operation at 150 psi and temperatures to 300° F, couplings are stocked in 1, 2, 2½, 3, and 4-in. sizes. Integral dike prevents pipe ends from touching, and laminated heavy-wall construction permits pipe wrench installation. • **Ed Conley Plastic Corp.**, 91st & Delaware, Tulsa 5, Okla.

For more details circle NED-401 A on enclosed inquiry slip

CHIP SEPARATOR
cleans chips off screw machine parts

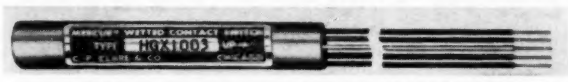


Compact chip separator will separate chips from screw machine parts at a rate of 1000 lb of parts per hour. Work and chips are fed into hopper where they are vibrated over a sloping screen through which high velocity air is blasted. Chips are blown upward as parts pass over the screen, passing through a directing hood into containers or onto a conveyor. Work is discharged from a chute at the side. • **Ransohoff, Inc.**, N. Fifth & Ford Boulevard, Hamilton, Ohio.

For more details circle NED-402 A on enclosed inquiry slip

CONTACT SWITCH
5-amp, 500-v mercury-wetted type

This HGX-1003 mercury-wetted contact switch can be used as a limit, float, or stepping switch; a pulse generator; time base; or in other applications where it is



actuated by a permanent magnet. Switch capsule is sealed in glass, pressurized with hydrogen and potted in an impregnated paper tube. It will handle contact loads up to 5 amp, 500 v, and 250 va maximums. • **C. P. Clare & Co.**, 3101 Pratt Blvd., Chicago 45, Ill.

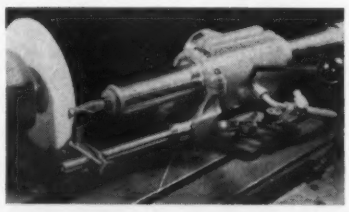
For more details circle NED-403 A on enclosed inquiry slip

PORTABLE MEGAPHONE
projects voice over 600 yd

User's voice can be heard 600 yd or more away when amplified with the Megavox transistorized, battery operated, portable megaphone. The 6-lb unit has a separate microphone jack so that it can be used in portable P.A. system. Constructed of aluminum with baked enamel finish, it is powered by three 4.5-v NEDA type 706 batteries and has a waterproof magnetic microphone. It will operate for up to 4 hr. List price is $149.95. • **Fanon Electronic Industries, Inc.**, 98 Berriman St., Brooklyn, N. Y.

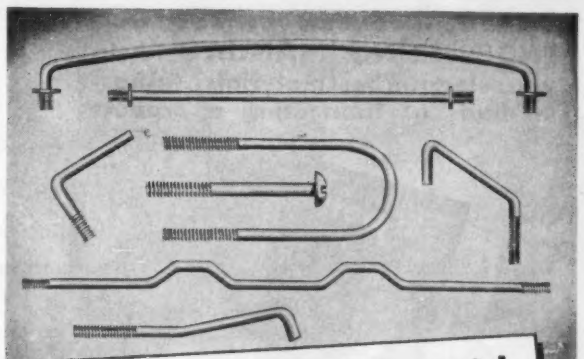
For more details circle NED-404 A on enclosed inquiry slip

TOOL GRINDING FIXTURE
for end mills, routers, and cutters



End mills, routers, shell mills, step drill margins, and stagger tooth cutters are but a few of the tools which can be accurately ground with this Air-Flo sharpening fixture. Spindle floats on a cushion of air to give sensitive feel to operator's hand. Conventional cup wheel or peripheral sharpening methods may be used. In addition, radial relief can be obtained by the broad contact or under-the-wheel method. Shank sizes up to 1¼ in. are handled, with larger size capacity as special. • **Steptool Corp.**, 3613 E. Olympic Blvd., Los Angeles 23, Calif.

For more details circle NED-405 A on enclosed inquiry slip



Looking for something special ...for a particular application?

...rely on Ohio Rod Products for—

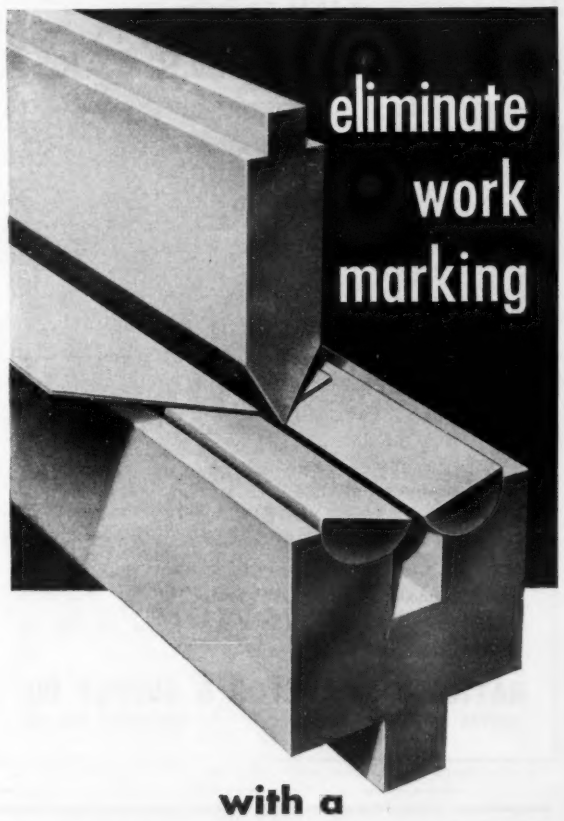
SERVICE—QUALITY—UNIFORMITY

OHIO ROD makes Special Headed and/or Threaded Fasteners in short and long length — in short or long runs. Headed, Threaded, Collared, Bent, or Offset.

Send drawings or blueprints for quotes and literature.

OHIO ROD PRODUCTS CO., INC.
20254 1st AVENUE • BEREA, OHIO

For more details circle NED-406 A on enclosed inquiry slip



with a

DI-ACRO ROL-FORM DIE

Workmarking from forming sheet materials in press brakes and punch presses is greatly reduced and in many metals completely eliminated when formed with the Di-Acro Rol-Form Die. Hardened and precision ground rolls pivot smoothly in the die block to fold material without strain. You save costs by discarding elaborate and time consuming preparation and work methods, reducing polishing time, eliminating scrap parts. You also cut costs in press brakes and punch presses by reducing the number of dies needed and reducing set-up time.

One Di-Acro Rol-Form Die with a 60° upper die forms any angle to 60° and any thickness of metal to ⅛" just by adjusting the ram or bed of the brake. Where ultra-high finish material is to be formed, nylon inserts can be used in the die block to further reduce the possibility of work marks.

The Rol-Form Die is offered in five styles and in lengths from 6 inches to 12 feet for use in all sizes and models of press brakes and punch presses.

Look in the Yellow Pages

Consult the yellow pages of your telephone book under Machinery-Machine Tools for the name of your nearest Di-Acro distributor or write us.

di-acro PRECISION METALWORKING EQUIPMENT
pronounced die-ack-ro

O'NEIL-IRWIN MFG. CO.
354 Eighth Avenue • Lake City, Minnesota

For more details circle NED-407 A on enclosed inquiry slip

THESE MUELLER BRASS CO. ENGINEERING MANUALS help you select the best materials and best methods of fabricating a product

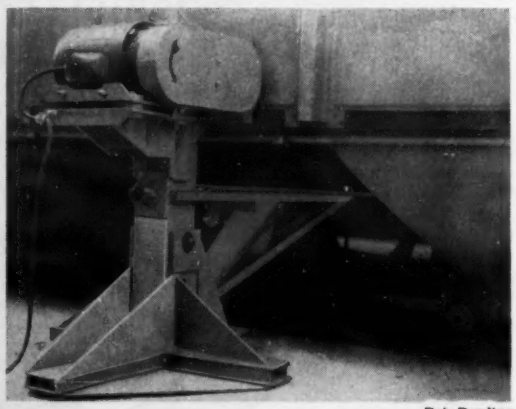
Mueller Brass Co. engineers have carefully selected and compiled the data contained in these technical manuals. Send for any or all of the free manuals that interest you; check appropriate box, clip out and mail with your return address.

- ☐ FORGINGS
- ☐ 600 SERIES BEARING ALLOYS
- ☐ COPPER BASE ALLOYS IN ROD FORM
- ☐ SCREW MACHINE PRODUCTS
- ☐ TUF-STUF ALUMINUM BRONZE
- ☐ COLD-PREST IMPACT EXTRUSIONS
- ☐ SINTEEL POWDER METAL PARTS
- ☐ FORMED COPPER TUBING

MUELLER BRASS CO. PORT HURON 37, MICHIGAN

▲ For more details circle NED-408 A on enclosed inquiry slip ▲

UNLOAD COVERED HOPPER CARS

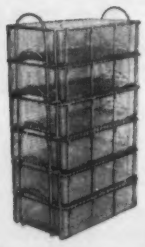


Pat. Pending

Now you can buy a shaker that does a real job of vibrating bulk materials out of covered hopper cars. The National Model 81 is handled by just one man and it will shake the contents out just as fast as you can take them away.

NATIONAL CONVEYOR & SUPPLY CO.
361 N. HARDING AVE. CHICAGO 24, ILL.

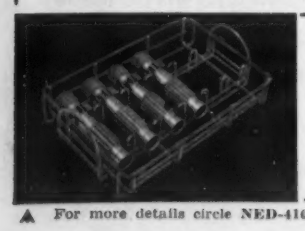
▲ For more details circle NED-409 A on enclosed inquiry slip ▲



PUT PARTS HANDLING ON A LOW COST BASIS

EEZY STAK® BASKETS

You can process parts for less money than it's costing you now by using Eezy-Stak parts handling baskets! Eezy-Staks have the exclusive patented "Inter-Lok" handles for convenient, compact stacking and storage. Parts handled safely . . . less risk of damage . . . rejects reduced. *Two types—compartmented baskets for segregated parts handling, open mesh type for bulk handling.* May be zinc-plated, plastic or neoprene-coated.

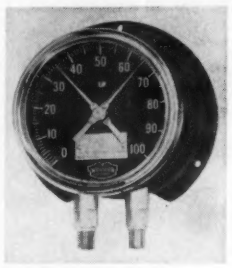


WRITE TODAY FOR BULLETIN B-57

Wire and Iron Products Inc.
1724 Sixteenth Street
Detroit 16, Michigan

▲ For more details circle NED-410 A on enclosed inquiry slip ▲

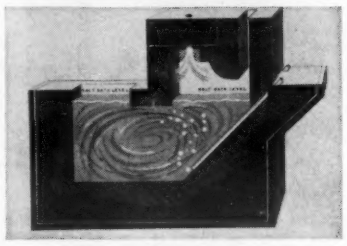
PRESSURE & VACUUM GAGES
for gas and fluid applications



Accuracy within 1 per cent of scale, bronze bushed rotary movement, and adjustable pointer are features of Regal medium duty pressure and vacuum gages in 3½, 4½, 6, and 8½-in. dial sizes. Available types include pressure and vacuum compound units for steam, air, oil, gas, and water in range from 30 in. vacuum to 10,000 psi; Freon units with combination pressure and temperature equivalents for Freon 12 or 22; altitude types with both feet-of-water and pressure scales; and Duplex units with two readings on one dial. Chemical diaphragm attachments are available for standard gages on uses where medium tends to clog Bourdon tubes. • **Weksler Instruments Corp.,** 195 E. Merrick Rd., Freeport, L. I., N. Y.

▲ For more details circle NED-411 A on enclosed inquiry slip ▲

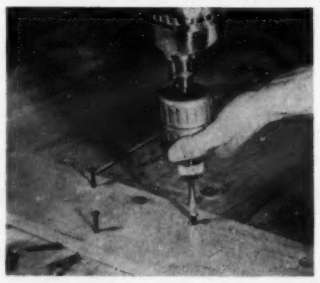
SALT BATH FURNACES
for heavy duty operation to 2300° F



Economical heat treating, heating for forging, billet heating, casting, and other heavy duty work can be performed with Ajax-Ankersen salt bath furnaces. Operating as high as 2300° F, they use either gas or liquid fuels without any basic furnace changes other than in the fuel introduction equipment. The salt is heated by radiation to the bath surface in an enclosed chamber. An air bubbler agitator circulates the bath and keeps temperature variation under 10° F throughout the bath. Rigid refractory walls are enclosed in a reinforced steel casing. Furnaces are built for specific uses. • **Ajax Electric Co.,** Frankford & Delaware Avenues, Philadelphia 23, Pa.

▲ For more details circle NED-412 A on enclosed inquiry slip ▲

SCREWDRIVING ATTACHMENT
gives electric drills high torque



Power of ¼-in. and larger electric drills is increased seven times for driving and removing screws, nuts, and bolts by the H352 reversible high torque drive attachment. Hand clutch assures full control of power, as well as safety. With a chuck (not included), drive also provides the reduced speed and power required for drilling in masonry and driving hole saws and steel drills. It lists for $14.95 with snap-in bits and adapter. • **Stanley Works,** Stanley Tools Div., 195 Lake St., New Britain, Conn.

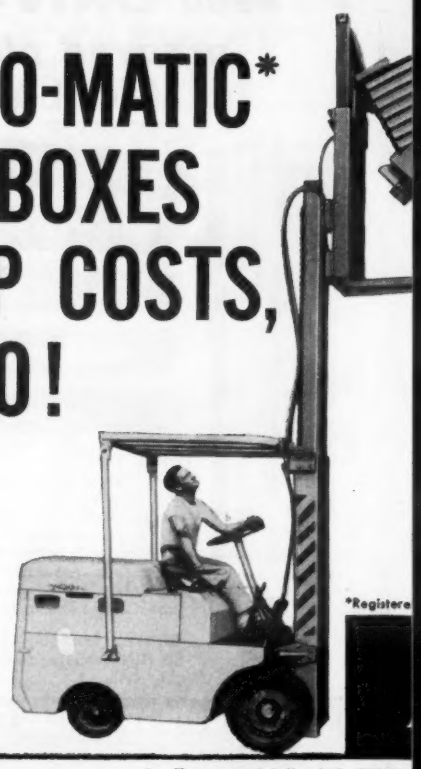
▲ For more details circle NED-413 A on enclosed inquiry slip ▲

RIVET SETTER
heavy duty pneumatic model

Semitubular, full tubular, or bifurcated rivets ranging from ⅛ in. diameter by ⅛ in. long to 3/16 in. diameter by 1 in. long are set by the Model 57 pneumatic rivet machine. Several heads grouped on a single base and combined with slide fixtures or transfer tables can function as one production unit adaptable to automatic cycling. Machine operates on 60 to 150-psi shop air lines. Stroke speed is adjustable to control impact on fragile materials. Pedestal or bench mounted setter has a 3-in. stroke and 12-in. throat depth. Tapered nose permits setting rivets on centers as close as 1 in. • **Milford Rivet & Machine Co.,** 929 Bridgeport Ave., Milford, Conn.

▲ For more details circle NED-414 A on enclosed inquiry slip ▲

WORK-O-MATIC* BOXES DROP COSTS, TOO!



*Registere

▲ For more details circle NED-4

BUSS Heat-Limiters

. . . can solve many overheating problems

They guard against troubles or danger by cutting-off current at predetermined temperature

Many types of electrical devices or apparatus can now be protected against excessive overheating creating a hazard or resulting in loss of material.

Properly installed, a BUSS Heat-Limiter will open the circuit should anything cause the temperature to rise above the opening point of the thermal cut-out.

Where used: BUSS Heat-Limiters can be installed in the heater element circuit—or if the heater current is controlled by a co be installed in

BUSS Heat-L able in many ty styles of termi requirement. Te lem and let BUS you solve it.

For more in Bussmann Mfg Graw-Edison Co

▲ For more details circle NED-41

▲ For more details circle NED-41

- CONTROLLED DUMPING
- UNIT LOAD HANDLING
- SAFE, COMPACT TIERING
- WORK LEVEL POSITIONING OF PARTS, WHEN COMBINED WITH UNION METAL POSITIONING STAND.

You'll find Work-O-Matic drop-bottom boxes reduce costs and increase efficiency by solving many troublesome handling problems.

THE UNION METAL MANUFACTURING CO.
Canton 5, Ohio • Brampton, Ontario

Trade Mark

UNION METAL
Material Handling Equipment

A on enclosed inquiry slip ▲

tactor they can
ne relay circuit.
niters are avail-
es and in many
ils to suit your
us your prob-
3 engineers help

ormation write,
Division Mc-
St. Louis 7, Mo.

Applications: BUSS Heat-Limiters can be used for such widely varying applications as: Hair Driers, Refrigerator Defrosters, Deep Fryers, Incubators, Ovens, Cookers, Heaters, Combination Room Coolers or other devices or apparatus where failure of temperature control might cause trouble or a hazard.

BUSS Safety Valve HEAT-LIMITERS—Another Outstanding Development by the makers of BUSS FUSES.

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FREE BOOKLET
gives full details on new seal for tapered roller bearings

Here's complete data on a new single-piece seal for tapered roller bearings—the SKF TySeal. This double-lipped seal permits fitting sealed bearings into the same space as standard tapered bearings. Both lips contact the cup I.D. (the best sealing surface) to keep lubricants in, keep out dust and dirt. And its special design minimizes danger of seal damage during bearing installation.

But get full details. The FREE booklet shows sizes available, features, typical applications (drawn to full scale for easy tracing). Just send the inquiry card today. 7850

EVERY TYPE—EVERY USE
SKF®
SKF INDUSTRIES, INC., PHILADELPHIA 32, PA.

*REG. U. S. PAT. OFF.

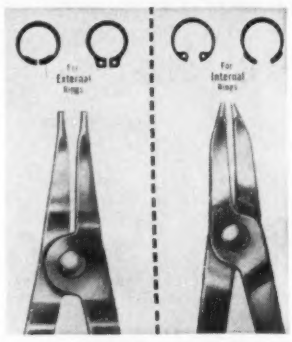
A on enclosed inquiry slip ▲

SONIC ENERGY CLEANER uses Freon as the solvent

Applications in which residual molecular film characteristics of chlorinated solvents or contact with water cannot be tolerated are handled by this sonic energy cleaning system which uses Freon as the solvent. System can have up to four or more cleaning stages, Freon distillate flush, sonic energy clean, sonic energy rinse, and Freon vapor rinse. Drying occurs almost instantaneously after the vapor rinse in the final stage. A high level of solvent purity is maintained in the complete system, housed in a stainless steel cabinet. Cleaning chamber sizes are 9 x 14 in., 14 x 20 in., and 18 x 25 in. Sonic energy is provided by magnetostrictive transducers. • **Bendix Aviation Corp.**, Pioneer-Central Div., Hickory Grove Road, Davenport, Iowa.

▲ For more details circle **NED-418 A** on enclosed inquiry slip ▲

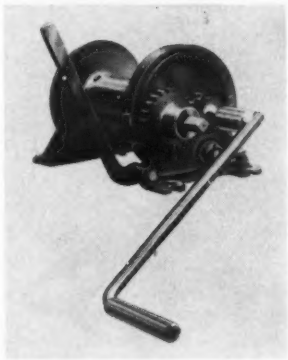
RETAINING RING PLIERS offered in 12 sizes and types



Commonly used sizes and types of Waldes Kohinoor Truarc internal and external retaining rings for all applications are handled by 12 Proto Truarc retaining ring pliers. Tools permit rapid installation and removal without distortion or damage. Precision ground tips are induction hardened and angled correctly to hold rings under tension and still withdraw freely. The 12 tools install rings on shafts (external pliers) with diameters to 4 in. and in bores (internal pliers) with diameters to about 7 in. • **Proto Tool Co.**, 2209 Santa Fe Ave., Los Angeles 54, Calif.

▲ For more details circle **NED-419 A** on enclosed inquiry slip ▲

1/2 & 1-TON WINCHES hand brakes are optional feature



Two-way spring-operated holding dogs are built into these winches, offered in 1/2 and 1-ton models. Hand brakes are an optional feature. The 1/2-ton winch has 3 or 6-in. drum widths and a gear ratio of 5.3:1. The 1-ton model has the same drum widths and offers a choice of 5.3:1 and 10.5:1 gear ratios. Both can be fitted for marine use. • **Beebe Bros. Mfg. Co.**, 2724 Sixth Ave. S., Seattle 4, Wash.

▲ For more details circle **NED-420 A** on enclosed inquiry slip ▲

AUTOMATIC PARTS FEEDER preset to feed at desired rate

Continuous flow of round steel slugs with a 3 1/4-in. diameter and 5-in. length is maintained at any preset rate by the Model 3000 variable speed parts feeder. It shuts off when the feed track is fully loaded and resumes operation automatically upon demand. Feeder has a 25-cu ft hopper, 12-in. wide belt, self-emptying bottom, adjustable conveyor elevating angle, and occupies a 48 x 52-in. floor space. Parts orienting devices can be applied on the elevating cleats, tooling plate, or delivery track if the application requires. Feeder can be used to feed a billet heating machine, high speed production equipment, assembly devices, and material handling systems. • **Feedall, Inc.**, 38399 Pelton Rd., Willoughby, Ohio.

▲ For more details circle **NED-421 A** on enclosed inquiry slip ▲

NEW PISTON RING CATALOG BY AUTO-DIESEL

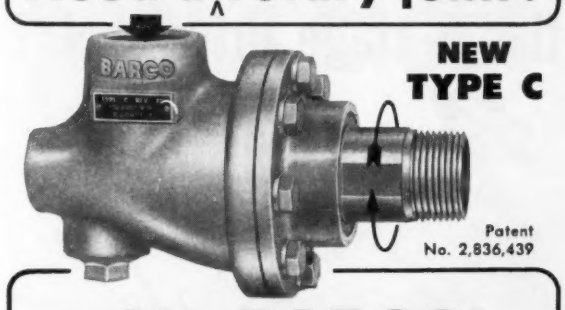
A must for all Die Casting Machine Users:
Highlighting this new catalog are:

- Dieloy Cast Iron plunger rings for Hot Chamber Machines
- Hardened Stainless Steel plunger rings
- "NIHARD STEEL RINGS" for Hot Chamber Machines
- NIHARD STEEL PLUNGER RINGS for tips on Cold Chamber Machines
- Tips & shot well sleeves are also manufactured for the die casting machines

Catalog on Request
THE AUTO-DIESEL PISTON RING CO.
3141 Superior Avenue • Cleveland 14, Ohio

▲ For more details circle **NED-422 A** on enclosed inquiry slip ▲

Need a Better rotary joint?



NEW TYPE C
Patent No. 2,836,439

—it's BARCO!

For countless applications, Barco's new Type C Rotary Joint will give you the best operating records you've ever had—*and for LESS COST!*

"CRACK-FREE" CHROME PLATED SLEEVE—A standard Barco feature. Minimizes corrosion, friction, wear. Stainless steel spring also standard.

RESISTS SEAL RING BREAKAGE—The spherical seal ring is under compression, not *tension*, loading. Self-adjusting for wear. Seal withstands shock loads and alternating hot and cold service.

WIDE SPACED BEARINGS—Two, instead of one . . . increased bearing area. No lubrication required. Lowest friction.

200 P. S. I. STEAM RATING—Heavy duty service at *no extra cost.* Eight sizes, 1/2" to 3". *Send for new Catalog 310 today.* **BARCO MANUFACTURING CO., 530-B Hough Street, Barrington, Illinois.**

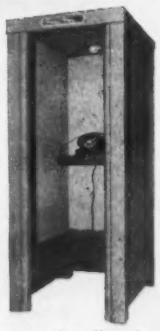
▲ For more details circle **NED-423 A** on enclosed inquiry slip ▲

...be heard there!

Place phones where you need them — with Acousti-Booths, noises won't interfere with conversations. Noises are absorbed before they can interfere with hearing and speech.

There is a model suitable for every location. And as always — the *acoustical performance is guaranteed.*

For model descriptions and prices, write for Bulletin No. A-142-41



BURGESS-MANNING COMPANY
Architectural Products Division
749 East Park, Libertyville, Ill.

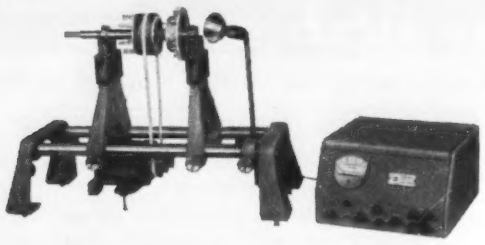
▲ For more details circle **NED-424 A** on enclosed inquiry slip ▲

NEW

MU-6 Dynamic Balancer

With Seismic Pick-ups That Reject Floor Vibrations

Dynamically balances all high speed rotors from 4-ounces to 100 pounds! The MU-6 is simple, sensitive, rugged, versatile . . . *meets every requirement for rapid, low-cost balancing by manufacturers and service organizations.*



MU-6 Dynamic Balancer with rotor in balancing position. The machine and all associated equipment is designed and engineered to the highest standards of ruggedness and reliability.

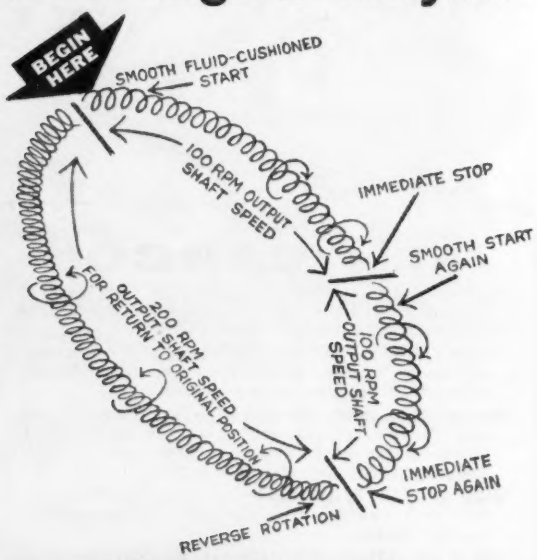
Brochure MU-6 Details Specifications and Twenty Important Features. *Write for your copy.*

MICRO BALANCING, INC.
Herricks Road • Garden City Park, Long Island, New York

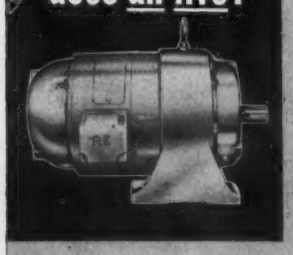
West Coast Representatives: Electronic Balancing Co., Long Beach, California

▲ For more details circle **NED-427 A** on enclosed inquiry slip ▲

How would you solve this 5-stage drive cycle?



This one modern REULAND power package does all five!



Modern Reuland Power represents a whole new concept in electric motors. Today, motors are supplied as complete drive packages...*tailored to the needs of each customer.*

Shown here is a typical demonstration of *Modern Reuland Power.* Contained within this one frame is a fluid coupling . . . two-speed reversing duty motor...gear reducer...and magnetic brake.

Would a similar drive *package* help *you?*

OUR NEW GENERAL CATALOG WILL COME IN HANDY—SENT FREE ON REQUEST

Gives details on Reuland's "Xpandable Design" and Free Special-Motor Library. Be sure to get a copy for your files.

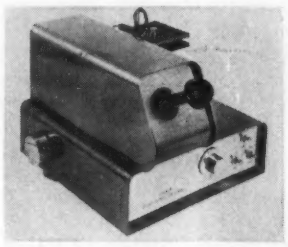
REULAND MOTORS

REULAND ELECTRIC COMPANY
WESTERN DIVISION: Alhambra, Calif.
EASTERN DIVISION: Howell, Michigan
DISTRIBUTORS IN ALL PRINCIPAL CITIES

Refer to Sweet's Product Design File, Section 5a

▲ For more details circle **NED-428 A** on enclosed inquiry slip ▲

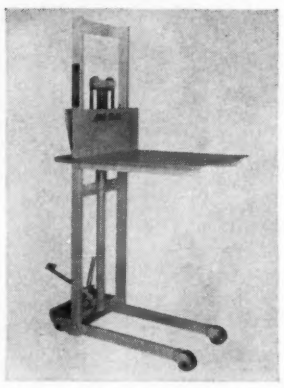
PORTABLE SPECTROSCOPE can be used by untrained personnel



Quick qualitative and semiquantitative analyses of common metals, soils, water, ores, minerals, alloys, and other products can be made with the Duo - Spectranal portable spectroscope. Easily used by untrained personnel, it projects spectra of the unknown and of a comparison solution side by side with an illuminated scale graduated in Angstrom units. Lines as close as 3 Angstrom units can be resolved through the 5-power adjustable eyepiece. Flame spectra of material under test is created by a rapid succession of microscopic oxygen-hydrogen explosions in the solution. Unit occupies a square foot of bench space, is 9 in. high, and has a built-in power supply. Price is about $575. • **Fisher Scientific Co.,** 376 Fisher Bldg., Pittsburgh 19, Pa.

▲ For more details circle **NED-429 A** on enclosed inquiry slip ▲

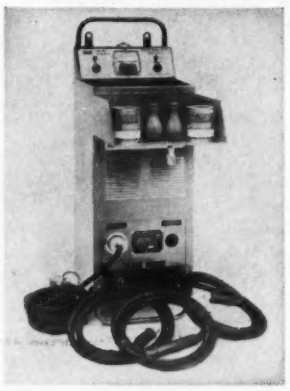
LIFTER-TRANSPORTER lifts 750-lb loads to 64 in.



Foot - operated hydraulic system of the Model FPD Little Dickie lifter and transport truck uses fluid pressure to hold the load. It lifts loads up to 750 lb to a height of 64 in. above floor level. The 204-lb unit tiers, stacks, and positions stock, and handles dies, jigs, molds, castings, and other tools. Lifting speed is 1 in. per stroke. Optional equipment includes floor lock, floor protective wheels, and pipe runners. Also offered is battery powered Model BHD with 20-in. per minute lift rate and built-in battery and charger. • **Langley Mfg. Co.,** 913 Cambridge St., Cambridge 41, Mass.

▲ For more details circle **NED-430 A** on enclosed inquiry slip ▲

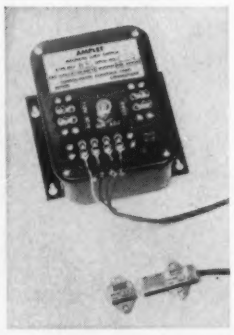
MAGNETIC INSPECTION MACHINE detects flaws in welds and castings



Either the wet or dry method of inspection can be employed with Model AH-7 magnetic particle inspection machine. The 700-amp portable unit detects cracks or flaws in welds and castings and can also be used for maintenance inspection on all types of metal. The 120-lb, 115-v ac machine has both alternating current and half-wave direct current outputs. It can also be used for limited demagnetization. Machine is 13 x 13 x 38 in. and has an 11 x 12 x 9-in. storage compartment. • **Peterson Machine Tool, Inc.,** Sonoflux Div., Merriam, Kans.

▲ For more details circle **NED-431 A** on enclosed inquiry slip ▲

MAGNETIC LIMIT SWITCH controls motion of two machine parts



Proximity of two sensing elements actuates the Amplet magnetic limit switch which has no moving parts. Device is suited to automation applications where precise control of the relative motion between two parts of a machine is required. Distance between probe and magnet trigger, at which action takes place, is variable from 0.020 to 0.200 in. This point is repeatable within 0.001 in. At full load, power input is 7 w at 115 v ac. Output signal is 50 microamps in "off" position and 5 w of 24-v dc in the "on" position. Unit is waterproof and unaffected by shock, vibration, moisture, or oil contamination. • **Consolidated Controls Corp.,** Bethel, Conn.

▲ For more details circle **NED-432 A** on enclosed inquiry slip ▲

Are your Wire Cloth Filtering and Screening Applications giving TOP EFFICIENCY?

How long since you checked your wire cloth filtering or screening? Perhaps new alloys, mesh sizes and weaves can show you new efficiencies and economies. Check your specifications and requirements with Cleveland today. They have available hundreds of the finest quality wire cloth samples from which to select a wire cloth for your needs. You can rely on Cleveland's recommendations — supported by 40 years of manufacturing experience in the weaving of wire cloth and fabrication into products. Send specifications today. Ask for Bulletin No. 7.

See our ad in MacRae's Blue Book and The Purchasing Directory

THE CLEVELAND WIRE CLOTH & MFG. CO.
3573 EAST 78th STREET, CLEVELAND 5, OHIO • DI 1-1832

▲ For more details circle **NED-433 A** on enclosed inquiry slip ▲

Franklin UNISEAL MOTOR

CUTS PARTS AND ASSEMBLY COST OF YOUR PRODUCT

Close-coupling of Franklin Motor to your product eliminates adapter casting, stub shaft, outboard bearing, coupling, etc. S/S motor shaft available to specifications. "Franklineer" your product and cut costs.

REDUCES PRODUCT WEIGHT

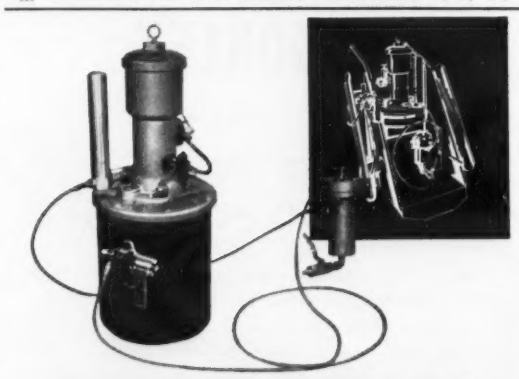
½ through 2 h.p., 56-frame NEMA and special designs. With or less base. Horizontal or vertical operation.

FREE DATA FOLDER

Cavity permits use of mechanical shaft seal.

Franklin Electric Co., Inc.
BLUFFTON, INDIANA

▲ For more details circle **NED-434 A** on enclosed inquiry slip ▲



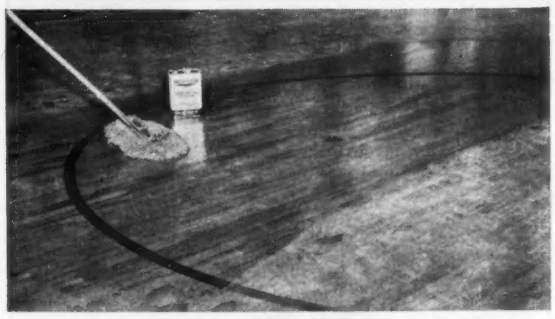
HydraAirless 20

The newest, most versatile airless spraying system on the market!

Big, powerful motor and all-new 20-to-1 ratio pump combine to make the finest airless spraying unit available today. Overspray is virtually eliminated. Now it is possible to spray in open areas without the conventional spray booth. Material savings as much as 40%. The Model 20-1 illustrated above is the basic, unheated airless system of the HydraAirless 20 line. Other models combine this unit with the famous Spee-Flo heater and exclusive Recirculating System (Pat. Pend.) for uniform temperature and viscosity control. All models available in fixed or mobile units for 5- or 55-gallon requirements.

For information on the complete line of HydraAirless 20 systems and accessories write for Catalog Sheet PM 918. Spee-Flo Co., 6614 Harrisburg, Houston 11, Texas.

▲ For more details circle **NED-435 A** on enclosed inquiry slip ▲



How to stop rubber marks

Multi-Clean FLOOR DRESSING tends to reduce and eliminate marks on *all types of floors* and leaves a surface that's highly resistant to future rubber marks.

This outstanding mop treatment polishes and preserves while it cleans. Makes wax last longer, discourages development of bacteria and fungi, and increases slip resistance. U/L lists it as an anti-slip product.

Clear, light-colored FLOOR DRESSING doesn't discolor or build up in mop as ordinary mop dressings do. Has pleasing aroma.

For further information, see Multi-Clean Distributor or write... Dept. NE-40-10

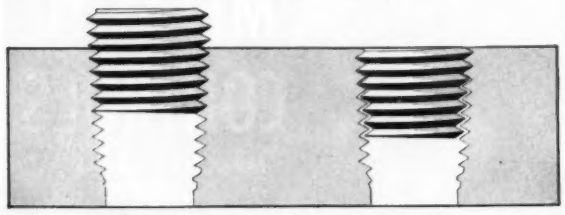
MULTI-CLEAN Method

MULTI-CLEAN PRODUCTS, Inc. St. Paul 16, Minnesota

▲ For more details circle **NED-436 A** on enclosed inquiry slip ▲

NEW FLUSH-TYPE PRESSURE PLUGS

UNBRAKO Levl-Seal with Dryseal Threads • seat level with assembly surface • develop a positive high-pressure seal without compound • can be used again and again



Flush seating eliminates unsightly and hazardous protrusions on assembly surfaces. Positive high-pressure seal without compound prevents leakage and eliminates contamination of system fluids. Both features make UNBRAKO Levl-Seal Pressure Plugs ideal for application in hydraulic and other high pressure systems. Sizes—1/16 through 1¼ in.—stocked by authorized distributors. Ask for Bulletin 2501.

INDUSTRIAL FASTENER Division sps

JENKINTOWN 24, PENNSYLVANIA

▲ For more details circle **NED-437 A** on enclosed inquiry slip ▲

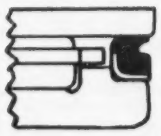
SEALED FOR SERVICE

RBC® PITCHLIGN®

ROLLER BEARINGS with SEALS

Why sacrifice bearing performance under conditions that require protection from foreign elements.

The same dependable performance of the RBC PITCHLIGN is yours with the added protection of molded synthetic rubber seals. Available in a standard series of Sealed Pitchlign Roller Bearings.



Positive seats provided by shoulders separate seals from all revolving parts. Permits free, no bind roller-cage operation for top efficiency.

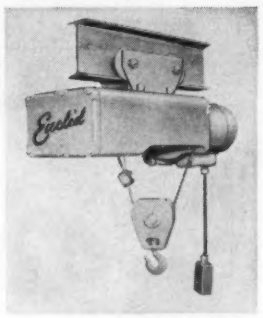
Seals can be mounted for retention of lubricant or exclusion of foreign matter.

More details?...Write for Bulletin SF-82.

RBC ROLLER BEARING COMPANY OF AMERICA
Sullivan Way • West Trenton, N. J.

▲ For more details circle **NED-438 A** on enclosed inquiry slip ▲

ELECTRIC HOISTS
500 to 12,000-lb capacities



Heavy duty wide-faced gearing, large proportioned anti-friction bearings, and large diameter cast iron drums with machined grooves are built into Series S electric hoists. Options include lug and hook-on suspension and plain, hand rack, and motor driven trolleys. A one-piece gear housing and heavy steel frame preclude misalignment or oil leakage. When the hoist motor stops, the mechanical load brake is instantly and automatically set. A plugging type limit switch is built in. Hoist also features motor interchangeability, permitting use of any standard NEMA D-flange Series 180 or 210 motor with integral disc brake. Capacities range from 500 to 12,000 lb. • **Euclid Crane & Hoist Co.**, Chardon Road, Euclid 17, Ohio.

▲ For more details circle **NED-439 A** on enclosed inquiry slip ▲

CRYOGENIC CONTAINER
stores liquid oxygen or nitrogen

The handling and transfer of liquid oxygen and nitrogen is safe with this cryogenic container. Made of stainless steel and vacuum insulated, it has a large open neck for easy filling and pouring. An automatic self-pressurization system provides for pressure-transferring the liquid from the container for use in its intended application. It is available in 5, 10, and 25-liter capacities, complete with handle, gages, and fittings. • **Aro Equipment Corp.**, Erie Street, Bryan, Ohio.

▲ For more details circle **NED-440 A** on enclosed inquiry slip ▲

PRESSURE REGULATING VALVES
for air, oil, water, gas service

Outlet pressures are not affected by wide variations in inlet pressures or variable rates of flow in Types A360 and A361 pressure reducing and regulating valves. Recommended for air, oil, water, gas, and noncorrosive fluid service, valves can be supplied with or without built-in bleeders. They are rated for 175 psi maximum outlet pressures and operating temperature to 200° F. Body style A360 has female inlet and outlet, as shown, whereas type A361 has female inlet and outlet plus side gage connections. Brass and bronze bodies in ¼, ⅜, and ½ in. sizes are offered. • **A. W. Cash Valve Mfg. Corp.**, Wabash & Morgan, Decatur, Ill.

▲ For more details circle **NED-441 A** on enclosed inquiry slip ▲

SMALL ELECTRIC MOTOR
for appliance, fan, and O.E.M. use

Compact size, permanent lubrication, quiet operation, and shaded-pole construction are features which adapt this 33-frame Unitized motor for appliance and other original equipment use. It is rated 0.001 to 0.02 hp and operates at 3000 rpm on 115-v 60-cycle ac in open or enclosed types. One version for horizontal mounting is usable where small axial end thrust is encountered, and the other mounts at all angles. Latter has constant stator and rotor alignment, and thrust washer limits axial rotor movement to 0.031 in. or less. This UL-approved motor has vibration damping resilient end ring or two tapped holes in posts on stator for mounting. Quantity prices start at $2.25. • **General Electric Co.**, 1 River Rd., Schenectady 5, N. Y.

▲ For more details circle **NED-442 A** on enclosed inquiry slip ▲

Here is sweeping made fast, easy and economical!

This all new Wayne 703 Power Sweeper cleans up to 40,000 square feet per hour, indoors or out...digs in and digs out the dirt...fills its filtered hopper to its full 3 cubic foot capacity... maneuvers in and out of tight spots everywhere.

Eliminate costly hand sweeping in congested areas, get *cleaner* sweeping, and sweep many times more area day in and day out for pennies per hour! Write, today, for full details on this new Wayne 703—*the little sweeper with the big performance features!*

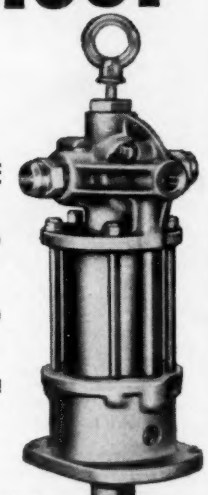
Priced for Small Budgets • Filter-Vac Dust Control Fingertip Controls • Fully Powered • Forward-Reverse Travel • Rider Attachment • Streamlined

WAYNE MANUFACTURING COMPANY
2374 EAST LEXINGTON STREET, POMONA, CALIFORNIA
Pomona • Chicago • Newark • Export: Henry R. John & Sons, Inc., New York

▲ For more details circle **NED-443 A** on enclosed inquiry slip ▲

All-New Alemite "77" Lubricant Pump

packs most power
FOR HIGHEST PERFORMANCE



★ 5.2 horsepower . . . 68% more powerful than any other lubricant pump of its class!
★ Lightweight, rustproof aluminum construction!
★ Delivers 19.7 lbs. of light-bodied lubricant per minute!
★ 3 models for all heavy-duty applications . . . all lubricants!

ALL-NEW
ALEMITE "77" FEATURES:

• Volume Air Distributing Valve has full floating slide, self-seating—self-cleaning—volume porting • Modern-Design, Highly Efficient Toggle Trip Mechanism provides balanced pressure on shuttle . . . won't bind • Straight-Line Exhaust has extra large orifice for highest pump efficiency • Hardened Steel Piston and Cylinder, lapped to a precision fit of 125 millionths of an inch • All-Steel Primer Valve, ground to perfect seal . . . hardened for abrasion resistance • Dynamic Primer assures priming and pumping of heaviest lubricants.

Write for free catalog today!

Symbol of SW Excellence — ALEMITE DIVISION STEWART-WARNER CORPORATION

Dept. AI-10, 1850 Diversey Parkway, Chicago 14, Illinois

▲ For more details circle **NED-444 A** on enclosed inquiry slip ▲

JUST WON'T SLIP. . .

Granet's new wet-grip **PYTHON** Neoprene just won't slip . . . even under the most trying conditions . . . yet costs no more than smooth neoprene coated or leather work gloves.

The wet-grip feature of **PYTHON** neoprene coated work gloves is a big plus for the man working with oil . . . grease . . . chemicals or other slippery materials.*

Flannel lining with wing thumb for added comfort and wear. Variety of styles . . . knit wrist to 18" gauntlet.

**Prove it to yourself . . . write for a free pair on your letterhead . . . and put them to the test!*

THE GRANET CORPORATION
25 LORING DRIVE, FRAMINGHAM, MASS.

▲ For more details circle **NED-445 A** on enclosed inquiry slip ▲

Start where you please—
SAW with ease . . .

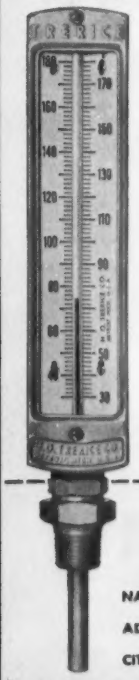
Zips through aluminum, Fiberglas, plastics, plastic laminates, even 16-gauge steel with minimum effort, maximum speed. Its performance is outstanding on metal laminates such as Mirawal, Metalwal, Met-L-Wood and Amorply.

- Rugged 2½" diameter saw blades give full ⅝" depth of cut.
- Powered with heavy-duty industrial-type 110 volt AC/DC portable 5/16" capacity electric drill motor. Ball bearing equipped drive for smoother operation.
- Leaves accurate, smooth milled edge that requires no sanding or finishing.

Write for Catalog E-49
THE KETT TOOL COMPANY
5051 Madison Road
Cincinnati 27, Ohio

▲ For more details circle **NED-446 A** on enclosed inquiry slip ▲

NEW! The high quality of
STAINLESS STEEL
. . . at lower cost!



TRERICE BX SERIES *INDUSTRIAL*
THERMOMETERS

Now available! The new high-quality, low-cost Trerice BX Series Thermometer with stainless steel front and bulb chamber. Easy-to-read scale markings . . . large red appearing mercury tube . . . durable 9-inch cast aluminum case. Guaranteed accurate temperature indication! Available in standard range models from —40°F to 950°F. No extra cost for straight, right side, left side, regular angle, regular oblique, or reverse oblique forms.

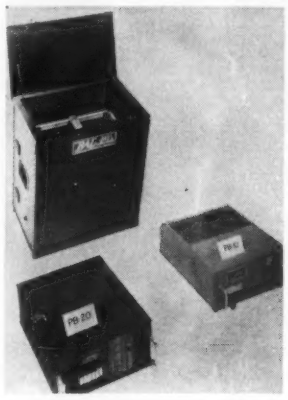
H. O. TRERICE CO.
1424 W. Lafayette Blvd., Detroit 16, Mich.
Please send bulletin 201 describing Trerice BX Industrial Thermometers!

NAME_____
ADDRESS_____
CITY_____ ZONE____ STATE____

TRERICE TEMPERATURE AND PRESSURE INSTRUMENTS

▲ For more details circle **NED-447 A** on enclosed inquiry slip ▲

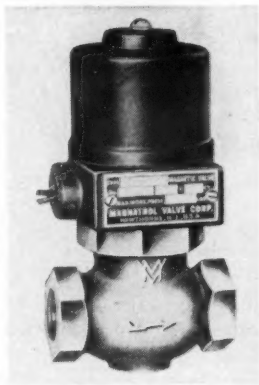
REUSABLE SHIPPING CONTAINERS for delicate instruments, equipment



Category 1 requirements of the Air Transport Association are met by line of reusable shipping containers for delicate instruments and equipment. Style A has a bonded vulcanized fiber-veneer body, riveted fiber angles, steel bottom corners, aluminum frame around top edge, piano hinged lid, and recessed handles. Style B is identical except for solid fiber walls. Body of Style C is made of ¼-in. plywood covered on each side with fiber. Sponge rubber, rubberized hair, polyurethane, or shredded foam rubber interior paddings are available. Aluminum carriage designed to fit any instrument is suspended inside container on Lord mounts. Any size can be specified. • **William Bal Corp.**, 947 Newark Ave., Elizabeth, N. J.

▲ For more details circle **NED-448 A** on enclosed inquiry slip ▲

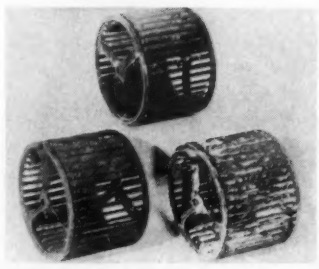
SOLENOID VALVE normally closed type for 500 psi



Type L full port solenoid operated valve can be cleaned and its operating mechanism replaced without removing the body from the pipeline. The normally closed unit is used in lines up to 500 psi, where fluid temperatures do not exceed 400° F, and with fluids not injurious to bronze and free from sediment. Solenoid coil has Class H insulation for continuous duty, high heat service. The valve return spring is also heat resistant. • **Magnatrol Valve Corp.**, 73 Fifth Ave., Hawthorne, N. J.

▲ For more details circle **NED-449 A** on enclosed inquiry slip ▲

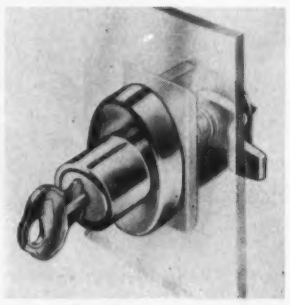
BLOWER WHEELS porcelainized to resist corrosion



Exceptional resistance to corrosion is exhibited by porcelainized (glass coated) blower wheels and assemblies designed for process and air conditioning equipment, cooling towers, evaporative condensers, and air washers. Sizes from 10 to 20 in. have capacities up to 12,000 cfm. Photo shows porcelainized wheel (top) compared with epon-coated wheel (lower left) and galvanized wheel (lower right) after 1000-hr salt spray test. Only minor rust traces appeared on the porcelainized wheel, whereas the other two were severely rusted. • **Morrison Products, Inc.**, 16816 Waterloo Rd., Cleveland 10, Ohio.

▲ For more details circle **NED-450 A** on enclosed inquiry slip ▲

LOCKING PAWL FASTENER for cabinets and enclosures



Dustproof and vibration resistant, locking adjustable pawl fasteners can be used on instruments, gasketed electronic equipment, small safes and cabinets, machine access doors, vending machines, and many other products. Installed by merely punching three holes and inserting two hidden screws, they are key actuated, and the pawl grips the panel firmly. Key is removable at any 90-degree position. Two sizes with grip ranges of 0.125 to 1.5 in. will accommodate a wide range of door panel thicknesses. Zinc plate is standard, with chrome plate optional. • **South Chester Corp.**, Southco Div. 200 Industrial Highway, Lester, Pa.

▲ For more details circle **NED-451 A** on enclosed inquiry slip ▲

NEW!
BRIGHT!
PERMANENT!

permanent line disc-type
AISLE MARKERS
...for wood, tile, concrete and asphalt floors!

• Never Wear Off! . . . Eliminate costly repainting of traffic lanes, aisleways, danger areas, guide lines, etc. • Choice of Colors! . . . Tough, reinforced fiberglas! Self-cleaning. Oil, dirt and acid resistant. • Fit Flush to Any Kind of Floor!

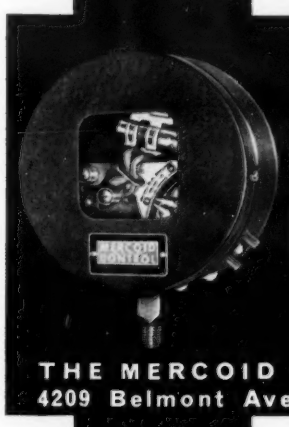
Correct size drills for installing Permanent Line Disc-Type Aisle Markers are available.

FOR BLOCK TYPE FLOORS — A complete line of Permanent Line *Block-Type* Aisle Markers are also available in all standard block sizes. Made of creosoted wood floor blocks capped by ⅝" layer of colorful, reinforced fiberglas. Quickly, easily installed.

WRITE TODAY FOR PRICES AND DETAILED INFORMATION
HAYDEN-SHAW MINERAL PRODUCTS
7816 W. Jefferson • Detroit 17, Michigan

Visit Booth No. 1403, Plant Maintenance & Engineering Show, Jan. 25-28
▲ For more details circle **NED-452 A** on enclosed inquiry slip ▲

NEW CATALOG AVAILABLE



MERCOID® CONTROLS
MERCURY SWITCH EQUIPPED

THE MERCOID CORPORATION
4209 Belmont Ave., Chicago 41, Ill.

Write for your copy } CATALOG NO. 860

Controls for—

PRESSURE
TWO-STAGE PRESSURE
DIFFERENTIAL PRESSURE
TEMPERATURE
TWO-STAGE TEMPERATURE
MECHANICAL MOVEMENT LEVER ARM AND FLOAT OPERATED
LIQUID LEVEL TRANSFORMER-RELAYS

▲ For more details circle **NED-453 A** on enclosed inquiry slip ▲

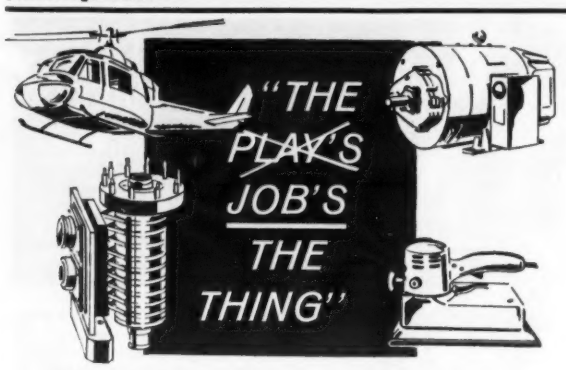
CONVEYORIZED PACKAGING
for Speed • Economy • Uniformity

Power Belt Conveyor furnished standard 18"; 22"; 30" O.A. Widths with 12"; 16"; 24" belt widths. Length to suit. Used with gravity roller or wheel conveyors — NYLO-® Bearings.

Tell us your requirements. Our Recommendation is free.

METZGAR CONVEYOR CO.
416 Douglas St., N.W.
MFRS. OF WHEEL & ROLLER GRAVITY & LIVE ROLLER CONVEYORS • POWER BELT CONVEYORS • SWITCHES • ACCESSORIES
GRAND RAPIDS 4, MICH.

▲ For more details circle **NED-454 A** on enclosed inquiry slip ▲



That's what counts! Drawing upon literally hundreds of Superior brush grades and contacts, our responsibility is to fit your job *exactly*, whether on original equipment or in maintenance. The Superior representative will make sure that you get the very utmost in performance and long life. Forty years' experience goes into his recommendation and ours.

Ask for "Get the Most Out of Your Carbon Brushes"

SUPERIOR CARBON PRODUCTS, INC.
9115 George Avenue, Cleveland 5, Ohio

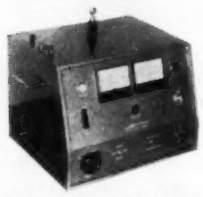
Since 1919 **Superior** CARBON BRUSHES

▲ For more details circle **NED-455 A** on enclosed inquiry slip ▲

TEST INSTRUMENTS

for ELECTRICAL EQUIPMENT

Laboratory . . Production . . Maintenance



Voltage Breakdown
Insulation Leakage
0.02 mma to 10 ma
Test Potentials to 30 kv

Bench HYPOT® Test Sets, a-c and d-c models, have outputs to 30 kv. Separate 4½" meters for test voltage and leakage current. Wide selection of models.
Model 424 Bench HYPOT® provides 0-5000 v d-c. For testing cables, condensers, coils, transformers, motors, and assemblies. Measures leakage current from 0.1 microampere to 100 microamperes over four scale ranges. Rapid testing of capacitors with output of 5 milliamperes under short circuit. Operates from 110-120 v 50/60 c outlet with long-life selenium high voltage supply.
Net complete $497.50

- **Insulation Materials Tester**
  Dielectric strength determined to laboratory precision. Interchangeable test fixtures for varnishes, porcelain, tape, acetate sheet, films, tubing and cloth. Write for Bulletin, Model 4501 HYPOT® Materials Tester.
- **Insulating Oils Tester**
  New portable design, only 42 lbs., for testing insulating oils at point of application as well as in the laboratory. Test potential variable from 0 to 35 kv, with 2 kva rating. Write for bulletin Model 4505 HYPOT® Oil Tester.
- **Measure Resistance to FIVE MILLION MEGOHMS**
  VIBROTEST® megohmmeters provide direct reading measurements to FIVE million megohms and higher with electronic power supply that eliminates tedious cranking. Write for bulletin "VIBROTEST".
- **Test Electrical Grounds**
  VIBROGROUND® measures resistance to ground of electronic, telephone, and power equipment. Direct reading. Operates from self-contained battery. Write for Bulletin "VIBROGROUND"®.

Complete Catalog Write today!

ASSOCIATED RESEARCH, Incorporated
"Electrical Testing Instruments Since 1936"
3765 W. Belmont Avenue • Chicago 18, Illinois 10—35.18

▲ For more details circle **NED-456 A** on enclosed inquiry slip ▲

INVESTIGATE

the lifetime economies of

PERKINS AIRadiators

CEILING OR WALL MOUNTED

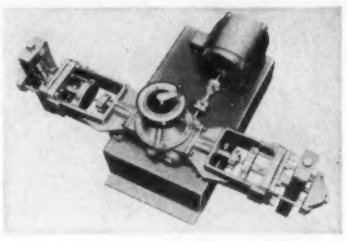
Write for Bulletin V
Tells how you get better plant heating, at low cost, with Perkins AIRadiators

Simplified mounting and reversible tapping locations assure economical installation on walls or ceilings, minimize piping costs. Perkins AIRadiators come in a full range of lengths and heights, all handling water or steam to 150 psi, all ruggedly built to last a plant's lifetime.

SHAW PERKINS MFG. CO.
Properly Designed Room Heat Distribution Equipment
201 E. CARSON ST., PITTSBURGH 19, PENNA.

▲ For more details circle **NED-457 A** on enclosed inquiry slip ▲

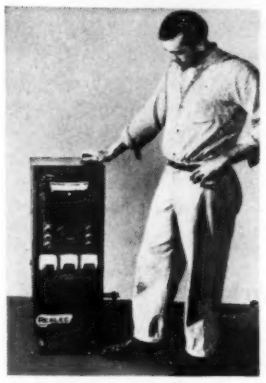
METERING PUMPS
function with 1, 2, 3 liquid ends



Capacities from 0.65 to 2025 gph are available in the Series 200 electrically driven metering pumps. The positive displacement, reciprocating, plunger type units have a metering accuracy within ±1 per cent, and operate against pressures up to 4000 psi. Parts in contact with solutions are made of corrosion resistant materials. Pump drive functions with one, two, or three liquid ends which can be changed as complete units for different capacities or liquids. A number of simplex, duplex, or triplex units may be coupled to the same drive shaft for blending two or more liquids. Illustrated model with two liquid ends has a 1350-gph capacity. • **Wallace & Tiernan Inc.**, 25 Main St., Belleville 9, N. J.

▲ For more details circle **NED-458 A** on enclosed inquiry slip ▲

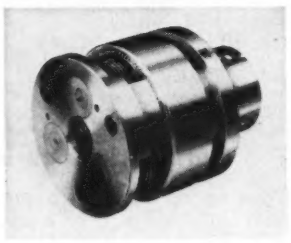
RESISTANCE HEATER
portable unit for warm heading



Warming of wire stock prior to heading operations is a function of the 5-kva portable Reslec resistance heating unit. The 14 x 18 x 34-in. unit handles 0.050 to 0.213-in. wire, and requires only an electrical connection. Wire drawing where annealing and processing are done at high rates while the wire is in motion, silver soldering, stretch forming of titanium and other sheet, and heating metal sheets are other uses. Heat ranges obtainable are from room temperature to that at which the material being heated melts and breaks the circuit. • **Herscott Corp.**, 1435 Preston St., Rockford, Ill.

▲ For more details circle **NED-459 A** on enclosed inquiry slip ▲

THREAD ROLLING HEADS
for 1/4 to 7/16-in. size range

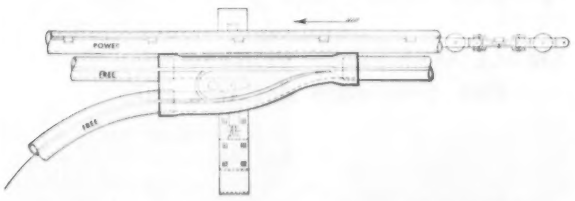


UNC and UNF sizes from 1/4 to 7/16 in. are covered by stationary and revolving styles of Series 3½ thread rolling heads. They are adaptable to turret lathes, hand screw machines, and automatic screw machines, and can be applied to threading, drilling, and tapping machines. They feature replaceable helix angle bushing so that by use of a "mean" angle, one set of standard bushings will roll all UNF and UNC threads within the range of the head. Thread rolls incorporate cage needle bearings and can be reversed for using both ends. Both styles are self-opening. • **Landis Machine Co.**, Waynesboro, Pa.

▲ For more details circle **NED-460 A** on enclosed inquiry slip ▲

TRACK SWITCH
for chain conveyor systems

Compact automatic track switch for power and free Chainveyor combination conveyor systems is electronically controlled through limit switches and solenoids,



or it can be operated manually through pull-chain attachments. Self-indexed carriers are routed in and out of preselected process or free storage lines, to and from stations, areas, and departments, or will recycle if required. Right or left-hand movement switches are available. By removing electronic unit, switch assembly may be used as a frog to allow smooth passage back into power lines over a special floating tongue built into the switch. • **Chainveyor Corp.**, 5618 E. Washington Blvd., Los Angeles 22, Calif.

▲ For more details circle **NED-461 A** on enclosed inquiry slip ▲

NEW NEW NEW NEW NEW NEW NEW NEW NEW

when it MELTS you know the *temperature!*

NEW *Markal* **THERMOMELT** TEMPERATURE INDICATORS

With Handy Adjustable Holder

The easy modern way to determine exact working temperatures!

Just mark or stroke the surface with THERMOMELT . . . when it reaches the desired temperature, the mark liquefies. There's no guesswork, no wasted time or material . . . THERMOMELT is the quick, precise way to determine heating temperatures. Accurate to within ±1%.

A Stik For Every Temperature from 113° F. to 2000° F.

SEND TODAY for free THERMOMELT literature and pellet sample (indicate temperature desired).

ALSO AVAILABLE IN LIQUIDS AND PELLETS for inaccessible or hard-to-measure applications. Wide range of temperatures.

Made by the Manufacturers of Markal Paintstik Markers and Protective Coatings.

MARKAL CO. 3053 West Carroll Avenue • Chicago 12, Illinois

▲ For more details circle **NED-462 A** on enclosed inquiry slip ▲

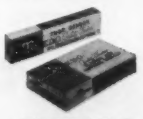
NEW LEVER-TYPE TUBE BENDERS MAKE DIMENSIONAL BENDS EASIER

ACCURATE, SMOOTH, EASY OPERATING

TOLEDO features enable you to bend hard drawn, in addition to soft temper tubing, without marring or deforming the tubing.

TOLEDO Lever-type benders operate smoothly to form neat, accurate bends to short radius. They're calibrated for bending any angle up to 180°.

Insist on TOLEDO tubing tools for all your copper, brass and aluminum tubing operations. TOLEDO tools easily identified in smart red and gold packages. You get guaranteed performance andlong service.

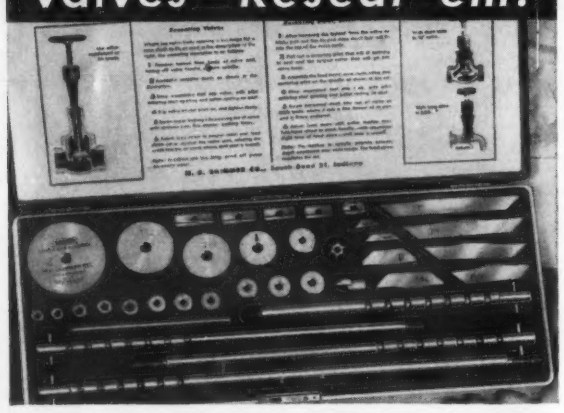


WRITE FOR CATALOG

TOLEDO® *Quality Checked* TUBING TOOLS
(Sold Thru Authorized Toledo Distributors Near You)
THE TOLEDO PIPE THREADING MACHINE CO. . . . TOLEDO 3, OHIO

▲ For more details circle **NED-463 A** on enclosed inquiry slip ▲

Don't junk leaky valves—Reseat 'em!



Pays for itself on the first 2 jobs!

Reseats flat and tapered seat globe or angle valves—all bibbs, faucets—quickly and accurately. The saving, over tearing out and renewing leaky valves and fixtures, is tremendous.

Cutters operating under screw feed, leave worn, scored seats glass smooth, level, absolutely tight. The cutter rotates on a level plane and is advanced by slight turns of the feed screw until the job is done.

A guide pilot centers each cutter; a tapered cone centers each spindle. Perfect alignment is inevitable. Cutters guaranteed. Write for literature!

2" for ¼" to 2" valves and ¼" to ¾" bibbs . . $59.85
3" for ¼" to 3" valves and ¼" to ¾" bibbs . . $79.50

M. B. SKINNER CO., South Bend 21, Ind.—Established 1898

▲ For more details circle **NED-466 A** on enclosed inquiry slip ▲

NEW LOW PRICES ON *Carpenter*

STAINLESS NO. 20Cb

. . . the original wrought forms for super resistance to sulphuric acid

Prices on all forms of Carpenter Stainless No. 20Cb have been reduced an average 5 percent. Prompt delivery from warehouse stocks. All forms now include Columbium (at no extra cost) to eliminate need for post-annealing parts and assemblies fabricated by welding. No. 20Cb is best single answer to the most severe corrosion problems. For latest prices and availability, contact nearest Carpenter office. Ask for Technical Bulletin 108-A.

THE CARPENTER STEEL COMPANY
Alloy Tube Division • Union, N.J.

▲ For more details circle **NED-467 A** on enclosed inquiry slip ▲

High Accuracy Gages for High Vacuum

by *Kinney*®

Now you can KNOW the pressures in your Vacuum System with greater assurance . . . KINNEY High Vacuum Gages not only give you accurate readings, they give them to you *faster* and *easier*. The KINNEY Compensated Thermocouple Gage covers the range from 3000 to 1 micron. The GICT Ionization-Thermocouple Gage—from 3000 microns to 10^{-7} mm Hg.

WRITE FOR THESE BULLETINS TODAY

3800.1 Compensated Thermocouple Gage
3811.1 Ionization-Thermocouple Gage
4510 Metallurgical Furnace Bulletin

KINNEY MFG. DIVISION
THE NEW YORK AIR BRAKE COMPANY
3612A WASHINGTON STREET • BOSTON 30 • MASS.

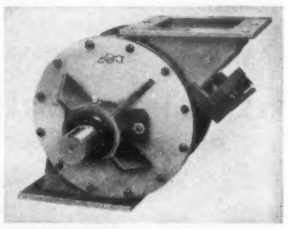
▲ For more details circle **NED-468 A** on enclosed inquiry slip ▲

THERMOCOUPLE ASSEMBLY
for applications up to 2200° F

Strong, corrosion resistant reinforced Fiberfrax base material comprises the protecting tube of the Alodure thermocouple assembly for molten aluminum applications. Also suited for use in up to 2200° F magnesium, lead, and other metals, the tube is not wetted by molten aluminum and will not contaminate critical melts. Assembly has a 1¾-in. OD and is offered in 6-in. increments from 12 to 48 in. Iron-Constantan and Chromel-Alumel calibrations are available. • **Pyrometer Co. of America**, Penndel, Pa.

▲ For more details circle **NED-469 A** on enclosed inquiry slip ▲

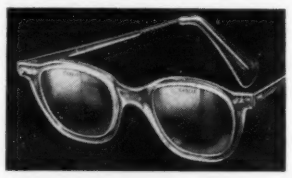
ROTARY AIR LOCK FEEDER
handles cubes, pellets, flakes



Free-flowing, friable cubes, pellets, chips, flakes, and prills are handled by this nonjamming, side entry rotary air lock feeder without crushing or grinding. Standard units are available in sizes 2, 2½, 3, 4, 5, 6, 8, 10, 12, 14, 16, and 18, whereas Blow-Thru units are made in sizes 4, 5, 6, 8, 10, 12, and 14. Carbon steel, Type 304 and 316 stainless steel, Inconel, Monel, and nickel constructions are offered. • **Young Machinery Co.**, Muncy, Pa.

▲ For more details circle **NED-470 A** on enclosed inquiry slip ▲

SAFETY GLASSES
fit majority of workers

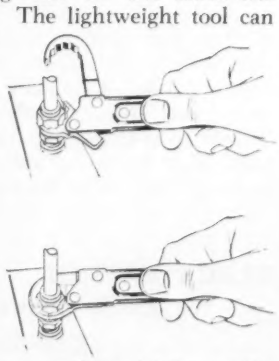


Low inventory of safety glasses is made possible by two design features of Polyfit plastic frames. First, bridge design fits comfortably on nearly all individuals, and secondly, the nickel-silver temples are interchangeable with most safety glasses equipped with 5-barrel hinges. Cable or spatula tapered temples and side shields are available. Lens sizes 46 x 39 and 48 x 41 mm can be chosen and have the F7 shape for easy removal. • **Chicago Eye Shield Co.**, 2727 W. Roscoe St., Chicago 18, Ill.

▲ For more details circle **NED-471 A** on enclosed inquiry slip ▲

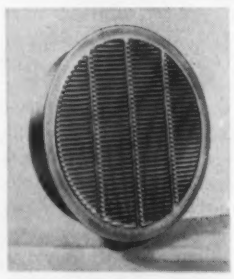
RATCHET WRENCH
for light work in close quarters

Making up tube, high pressure hose, hydraulic hose, and pipe fittings is among uses for the Kwik-Tite No. 499-F ratchet wrench. The lightweight tool can also be used for tightening machine nuts and hex fasteners. It needs only a 30-degree movement to get a new grip. Tool has hardened chrome-vanadium steel jaws, spring steel handle, stainless steel rivets, and cadmium plated surfaces. Jaws will not crush light brass or aluminum fittings. Wrenches are available in sizes for 3/16 to ⅞-in. nuts. • **Imperial Brass Mfg. Co.**, 6300 W. Howard St., Chicago 48, Ill.



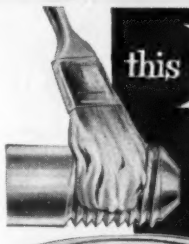
▲ For more details circle **NED-472 A** on enclosed inquiry slip ▲

SMALL ONE-PIECE LOUVER
fine grill work deflects rain



Grill openings of this one-piece midget louver are smaller than regular screening and effectively deflect rain while allowing free circulation of air. Made of anodized aluminum, the RLS Series of louvers consists of 1, 1½, 2, 2½, 3, and 4-in. diameter sizes. To install, louver is simply pressed into hole drilled to proper size. Three wedges hold it securely in place. • **Midget Louver Co.**, 6 Wall St., Norwalk, Conn.

▲ For more details circle **NED-473 A** on enclosed inquiry slip ▲



this NO-COST TEST OFFER has CONVINCED thousands

. . . send for YOUR FREE "TEST CAN" of C-5 "hi-temp" ANTI-SEIZE THREAD COMPOUND!

For use wherever threaded connections are subjected up to 1800F°, temperatures such as boiler, manhole, face plate studs, cylinder heads, and manifold studs or flange bolts on high temp steam lines and pumps.

Try C-5 and see why manufacturers, refiners and power producers have made it a part of their regular preventative maintenance program.

fel-pro C5 "HIGH-TEMP"

✓ Ends Seizing and Galling even up to 1800°F.
✓ Reduces Wrench Torque
✓ Ends Stud Breakage
✓ Permits Repeated Re-use
✓ Speeds Assembly and Disassembly
✓ Protects Stainless Steel at all Temperatures

1614BR

ANTI-SEIZE THREAD COMPOUND

C-5's exclusive colloidal copper formula separates mating metal threads and surfaces with cushioning, protective copper plating. C-5 prevents galvanic action and eliminates pitting even when dissimilar metals join. On mating metal surfaces, C-5 saves gaskets and countless man hours.

WRITE TODAY . . . For Your FREE Test Sample Can of C-5.

FELT PRODUCTS MFG. CO.
Dept. 68, P.O. Box 8609
CHICAGO 80, ILL.

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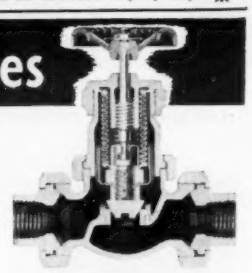
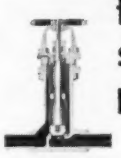
Packless Valves



for every stem-leakage problem



Corrosive liquids, hazardous gases, steam . . . wherever stem leakage occurs, Robertshaw packless valves give *positive* protection.

The heart of each valve is the famous Sylphon® Bellows — specially engineered of brass, phosphor bronze, monel or stainless steel, depending on temperature, pressure or atmosphere involved.

FREE catalog shows wide range of Robertshaw packless valves. Ask for Catalog AY-F. Fulton Sylphon Division, Robertshaw-Fulton Controls Co., Knoxville, Tennessee.

Robertshaw MR CONTROLS

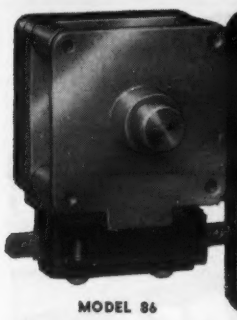
▲ For more details circle **NED-475 A** on enclosed inquiry slip ▲

WEIGH IT as you lift it! *with the* MARTIN DECKER LIFT TRUCK WEIGHT INDICATOR

Here's the accurate, convenient, safe, low-cost way to prevent overloads—totalize truck and car loading . . . take weight inventories. Martin-Decker Corporation, 3431 Cherry Avenue, Long Beach 7, Calif. Write for bulletin S-29.

MARTIN DECKER *Industrial Weighing, Load Measurement and Recording Instruments*

▲ For more details circle **NED-476 A** on enclosed inquiry slip ▲



HAGEN manual pneumatic timer...

MODEL 86

FOR MANUAL START AND AUTOMATIC STOP FOR ANY TIMED PROCESS OR OPERATION

★ Compact — requires only 7½ sq. in. for mounting
★ May be mounted in any position
★ Accurate — maintains ±15% of mean setting
★ Timing Range — 0.2 sec. to 60 sec.
★ Operates on 90% captive air principle

A high quality — low cost timer whose mechanical life has been tested to over 10 million operations. (Switch 1 million).

Write for Bulletin No. 1620 for complete specifications. Address Dept. NED-160.

HAGEN MANUFACTURING COMPANY
Baraboo, Wisconsin

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K. O. "HEAT" with long-life SILICONE GREASES

Heat-stable Dow Corning Silicone Greases deliver a knock-out punch to costly lubrication failures and sharply reduce relubrication and maintenance costs. They "stay put" at temperatures from −100 up to 500 F . . . won't drip, evaporate or gum up.

Silicone high temperature greases are the money-saving way to lubricate ball bearings, bushings, cams, gears, valves and other parts that get *hot* in service.

For full information on silicone lubricants, write department 5401

first in silicones **Dow Corning CORPORATION**
MIDLAND, MICHIGAN

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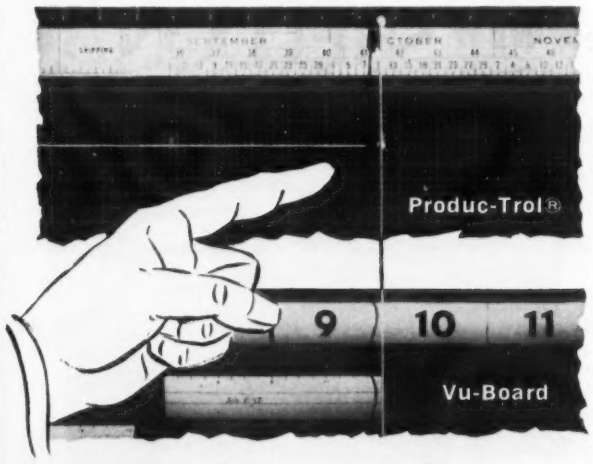

Put your finger on it FAST... with the Wassell TWIN CONTROLS

You can put your finger on trouble in seconds with the Wassell **TWINS**

Produc-Trol® will give you delivery dates, parts supply, project status.
Vu-Board will tell you if the machines are loaded to meet those dates.
There's no digging in files or calling for reports . . . The facts are right in front of you to foresee problems in time to solve them.
For more information or a demonstration of how the Produc-Trol — Vu-Board twins can help you save time and dollars, write:

WASSELL ORGANIZATION, INC.
DEPT. N-1, WESTPORT, CONNECTICUT • EST. 1935

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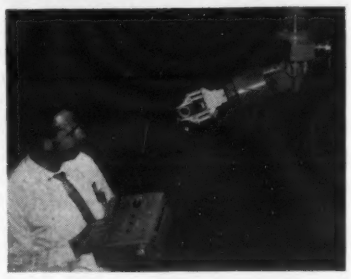
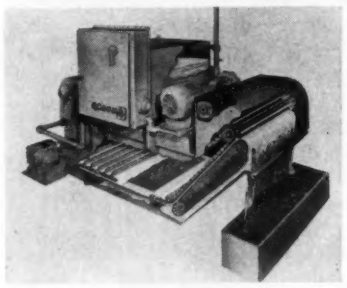
REMOTE MANIPULATOR
has high dexterity, fast response



Offered commercially in the price range of master - slave types, the Model 100 Mechanical Arm is an economy class electro - mechanical manipulator. This remote controlled, powered device permits an operator to work from a remote, shielded location and to perform precision tasks inside a sealed radioactive or otherwise hazardous area. Viewing can be by closed circuit TV or through safety glass windows. It has high dexterity and fast response, and handles loads weighing up to 200 lb. • **General Mills, Inc.**, Mechanical Div., 1620 Central Ave. N.E., Minneapolis, Minn.

▲ For more details circle **NED-480 A** on enclosed inquiry slip ▲

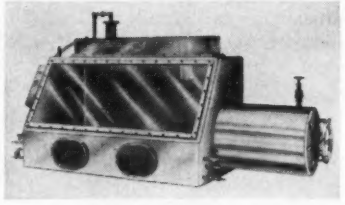
AUTOMATIC FILTER
media is under pressure and vacuum



Filter media travels on the bottom of a settling tank and above a vacuum box in this automatic Hydro-Vac filter for machine tool coolants. Dirty coolant enters filter only 18 in. above floor, passing downward to filter media where all contaminants are removed. Dirt remains on the media, and clean liquid passes to suction of filter pump. Coolant can then be pumped directly to machine or to a clean coolant reservoir. When completely contaminated, the media and a scraper conveyor travel to discharge sludge into a hopper. • **Hydromation Filter Co.**, 19661 Schoolcraft Ave., Detroit 23, Mich.

▲ For more details circle **NED-481 A** on enclosed inquiry slip ▲

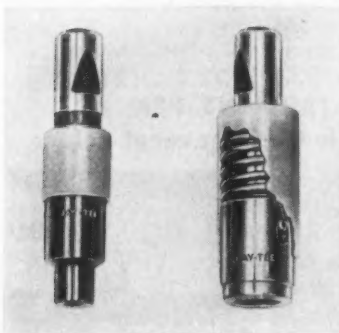
SUPER-DRY ENCLOSURE
glove box has vacuum-tight airlock



Organic or radioactive chemicals and modern metals that cannot tolerate humidity are safely handled in the super-dry environment provided by the Model A-13 stainless steel glove box. Combination of a Freon-tight main chamber and an oil-free gas drying system brings the dew point down to −75° F in 30 min. The glove box has a vacuum-tight autoclave type airlock with two valves for admitting and evacuating inert gas, plus a 1-in. vacuum pump-out connection for evacuating air. All corners of the 48 x 26 x 28-in. box are rounded. Sloping front of the enclosure is ¼-in. thick safety glass. Lengths of 5, 6, and 8 ft are also offered. • **S. Blickman, Inc.**, 8400 Gregory Ave., Weehawken, N. J.

▲ For more details circle **NED-482 A** on enclosed inquiry slip ▲

STAKING TOOLS
in stock sizes for parts assembly



Used in all types of air, hydraulic, kick, arbor, and impact presses with or without indexing fixtures, Jay - Tee Stakers are standardized staking tools which are stocked in eleven sizes with 3/16 to ½-in. diameters. Usable on ferrous and nonferrous assembly operations, they have ½-in. shanks. These precision tools are made of hardened tool steel. They have a built-in hold-down, automatic stripping device, and a nylon sleeve which prevents pinched fingers and acts as a lubrication shield. • **Jay-Tee Mfg. Co.**, 1515 N. 25th Ave., Melrose Park, Ill.

▲ For more details circle **NED-483 A** on enclosed inquiry slip ▲

NEW, LOWER COST ELECTRONIC GAGING

The new Electro-Probe Model 230 P-2 is far more than just another electronic test indicator.

- **No need for special stands or holding fixtures.**
- **No need for external power.**
- **No voltage fluctuation or warm-up problems.**
- **No need for close gage head positioning during set-up.**

The Electro-Probe introduces a new concept in Dimensional Control. Use of *printed circuits* and *transistors* means trouble-free performance. Connections are sure, operating current amazingly low — no heating or voltage regulation problems, no dependence on electrical outlets. Learn more about this truly portable, reliable, accurate and versatile gaging device.

Write for Literature.

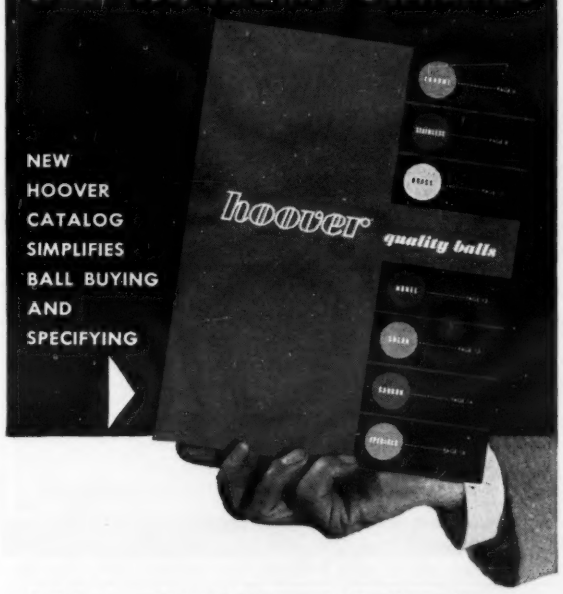
FEDERAL PRODUCTS CORPORATION
9171 Eddy Street • Providence 1, R. I.

Ask **FEDERAL** *First*

FOR RECOMMENDATIONS IN MODERN GAGES . . .
Dial Indicating, Air, Electric, or Electronic—for Inspecting, Measuring, Sorting, or Automation Gaging

▲ For more details circle **NED-484 A** on enclosed inquiry slip ▲

Get Complete Ball Information In Accordance With New AFBMA* Standards



This new catalog details America's widest selection of standard balls in chrome, stainless and carbon steel, brass, bronze, monel, and special materials. Included are tables that show conversions from previous standards to newly revised AFBMA standards.

Under the new AFBMA standards, balls are graded by spherical tolerance expressed in millionths of an inch. For example:

A ball guaranteed to be spherical within 25 millionths of an inch is a grade 25.

A ball guaranteed to be spherical within 10 millionths of an inch is a grade 10.

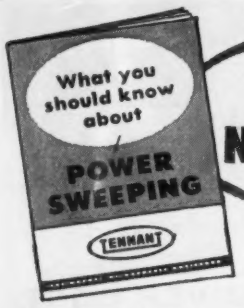
The information in this catalog will enable you to specify readily and accurately the product required. Be sure to order your copy today.

*Anti-Friction Bearing Manufacturers Association

hoover
BALL AND BEARING COMPANY
Ball Manufacturing Facilities:
HOOVER BALL DIVISION, ANN ARBOR, MICHIGAN
COOLIDGE CORPORATION, MIDDLETOWN, OHIO
STROM STEEL BALL COMPANY, ERWIN, TENNESSEE

Hoover Ball Division NED-1
Hoover Ball and Bearing Company
5400 South State Road, Ann Arbor, Michigan
Please send new Hoover Ball Catalog.
Name_____
Title_____
Company_____
Address_____
City_____ Zone____ State____

▲ For more details circle **NED-485 A** on enclosed inquiry slip ▲



FREE!
New Booklet!

"What you should know about
POWER SWEEPING"

A "must" for modern maintenance, this new 12-page booklet tells how vacuumized * power sweeping has revolutionized maintenance methods. Gives concise, practical answers to many sweeping questions:

- How soon will a power sweeper pay for itself?
- How to estimate the money you will save?
- How do you get the most from your power sweeper?
- What type and size of sweeper is best for you?
- What about power sweeping and nuclear fallout?

Plus: Typical in-use photos . . . diagrams of soilage pickup systems. Basic facts on typical sweeper performance . . . power used . . . accessories available. *Write today! Free!*

*Developed and introduced by the G. H. Tennant Co. in 1947.

TENNANT *Industry's Most Widely Used* POWER SWEEPERS

G. H. TENNANT COMPANY • 715A N. LILAC DRIVE • MINNEAPOLIS 22, MINNESOTA

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SEND FOR FREE WEATHERSTRIPPING
SAMPLES, SPECIFICATIONS, DATA

Bridgeport INNER-SEAL

Try it yourself! See why patented INNER-SEAL lasts longer — seals better. See how it can solve **your** sealing problems.

Examine the unique construction — resilient Kem-Blo* Sponge rubber locked into extra rugged steel wire reinforcing flange and covered with tough Neoprene† latex.

Stops air leaks; silences rattles; quiets slamming, absorbs shocks; seals out water, noise, dirt, dust, insects.

Used successfully for years by leading manufacturers.

*Registered Trade Mark E. I. duPont de Nemours & Company
†Registered Trade Mark U. S. Rubber Co

Write Dept. N-1

BRIDGEPORT FABRICS, INC., Bridgeport 9, Connnecticut

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NATIONAL CAM CONTROLS HAVE...
limitless applications

for multiple sequences

- Large Profiled Cams . . . Heavy Duty Rocker Arm Contacts . . . Control up to 60 Circuits . . . Wide Range of Cycling Rates with motor drives . . . External Drive from Machine Controlled . . . Complete Control Centers . . . For any enclosure or mounting.

Write for Bulletin No. 204

National Time & Signal Corp.
21800 Wyoming • Detroit 37, Mich.

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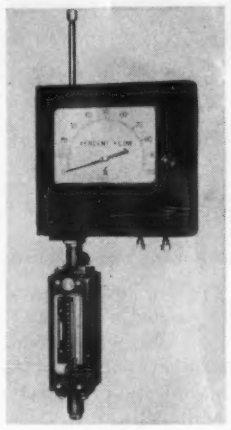
FLUID FLOW TRANSMITTER
signals recorders, controllers



Model 58 pneumatic transmitting Rotameter is a "position balance" type unit of high accuracy, suitable for use on Safeguard glass-tube or metal-tube rotameters. It provides air signals of rates of fluid flow to remotely located recorders and controllers. Four adjustments permit field recalibration whenever basic operating conditions change. Per cent scale on the transmitter case is suitable for any calibration. Variations in air supply between 20 and 25 psi do not affect accuracy. • **Schutte & Koerting Co.**, Instrument Div., Cornwells Heights, Bucks County, Pa.

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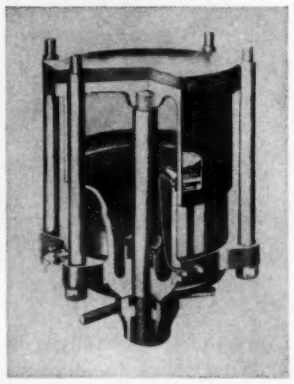
PNEUMATIC DIE CUSHION
made in nine different sizes

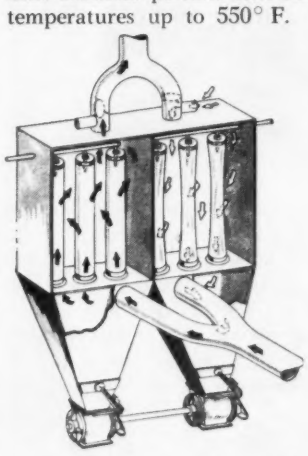


Improved universal pneumatic die cushion can be installed on a punch press in a bolster plate or press bed mounting. Nine sizes from Model D-3 to D-18 have oversize hardened and ground piston stems to compensate for minimum off-center loading of the pin pad. Ring holding pressures vary from ½ to 20 tons. Cushion is offered with necessary fittings, and combination reducing-regulating valve and pressure gage. • **Dayton Rogers Mfg. Co.**, 2824 13th Ave. S., Minneapolis 7, Minn.

▲ For more details circle NED-490 A on enclosed inquiry slip ▲

DUST COLLECTOR
high temperature application unit has self-cleaning filter tubes

Use of glass filter fabric in the Type CO cloth tube dust collector permits efficient air and gas filtration at temperatures up to 550° F. Other natural and synthetic fabrics can also be used, but at lower temperatures. Dust is collected on the inside surfaces of the filter tubes which are cleaned by the Pressure-Jet method (see diagram).



Short blasts of high pressure air, alternating with a small amount of reverse airflow, partly collapses the tubes (see right section). This action cleans the filter surfaces and deposits the residue in storage hoppers for disposal. Section at left is in normal operation. Intensity of the cleaning action may be regulated. The dust collector is automatically controlled by an adjustable electric program timer and is composed of multiple compartments. • **Pangborn Corp.**, Pangborn Boulevard, Hagerstown, Md.

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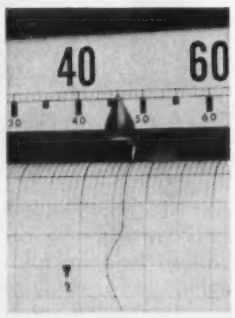
BALL POINT INSTRUMENT PEN
cartridge offered in several colors



Dynamaster electronic recording and controlling instruments can be equipped with ball point pen in place of standard ink type. Pen is suited for operation at chart speeds from ¾ in. per hour to 240 in. per minute, with instrument balancing speeds from 0.4 to 24 sec. Ink cartridges in several colors are reproducible on standard office copying machines. • **Bristol Co.**, Box 1790, Waterbury 20, Conn.

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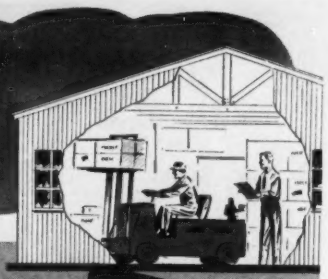
KEEP SMOG Outside...



CONVERT TO LP-GAS with BEAM BUTANE-PROPANE CARBURETION EQUIPMENT

SAVE MONEY TOO!

CLEAN: BEAM LP-Gas Carburetion virtually eliminates noxious fumes.

ECONOMICAL: Beam Carburetion conversion kits for gasoline engines TRIPLES ENGINE LIFE — SAVES up to 40% on FUEL — Cuts oil consumption 66% — Cuts motor overhaul and downtime to a minimum.

MODERN: BEAM is first with the latest improvements in LP-Gas carburetion developments.

PROVEN: BEAM is fastest growing LP-Gas carburetion manufacturer serving the Material Handling Industry.

SERVICE: WRITE FOR FREE LITERATURE AND NAME OF YOUR NEAREST DISTRIBUTOR.

BEAM PRODUCTS MFG. CO.
3040 Rosslyn Street • Los Angeles 65, California
CHapman 5-5791

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LIGHT WHEN YOU NEED IT

. . . automatically with F-P controls

Fisher-Pierce photoelectric lighting controls automatically turn on lights in parking lots, railroad yards, docks, loading areas, storage and security areas—whenever daylight drops to preset turn-on setting—regardless of weather or time of day. Turn-on setting is adjustable, never needs re-setting; various models available with turn-on from 1 to 500 f.c. Easy to install, housed in weatherproof watt-hour meter case. Reliability and ruggedness proven by ten years of use.

Standard Model 63300C switches lamp loads up to 3000 watts, special model switches 6000 watts; SPST, SPDT or DPST power contactors. For 105-130 or 210-250V, 50/60 cycles. For larger loads, control can be used with low-cost F-P Type 250A Multiple Relays. Bulletin on request. Write The Fisher-Pierce Co., 86 Pearl Street, So. Braintree 85, Mass.

FISHER FP PIERCE
PHOTOELECTRIC LIGHTING CONTROLS
AN AFFILIATE OF SIGMA INSTRUMENTS, INC.

▲ For more details circle NED-494 A on enclosed inquiry slip ▲

NEW SHELDON 15" PRECISION LATHE

New: Revolutionary double-box Headstock (Pat. Pend.) "WORK-HOLDING-ONLY" Spindle. Single-Shift Back Gear Lever on Headstock. Headstock and Apron running in oil. 1½" Hole through Spindle. 60-pitch Gear Box with built-in Lead Screw Reverse. Amazing LOW PRICE.

Different: Spindle rigidly held in two large "Zero Precision" tapered roller bearings arranged in new box-type design. Electrical switches and push-button stations fully enclosed in built-in well in headstock. Two independent clutches in apron for selecting power feeds. Cam-action tailstock clamp for rapid release and instant locking of tailstock. Triple, cogged, V-belt outboard drive—eliminates intermediate shafts—delivers more power to spindle.

This all new lathe bridges the gap between conventional belt driven and geared head lathes. It combines capacity and power with economy and flexibility, with 5', 6' or 8' beds.

Write for Circular
SHELDON MACHINE CO., INC. 4222 Knox Ave. Chicago

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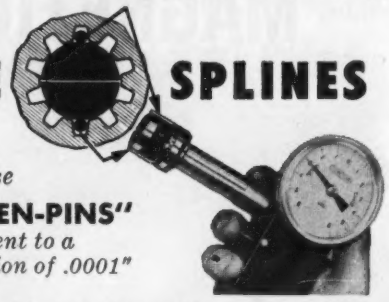
At last . . . a simplified way to

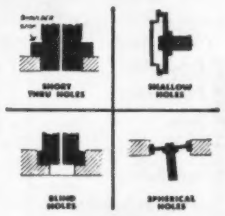
GAGE SPLINES



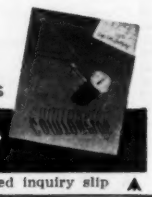
with precise
"BETWEEN-PINS"
measurement to a fraction of .0001"

COMTORPLUG with interchangeable expanding plugs to gage simple or special holes from 1/8" to 10" dia.

Insert into your spline or internal gear the unique expansion plug equipped with gaging wires . . . let it expand to firm contact . . . and you see the exact between-pins size shown in large graduations easily readable to a fractional tenth. For simple as well as special holes, Comtorplug's "automatic-accuracy" gaging has won a place in the production control set-ups of hundreds of fast-moving programs. *See why —request 8-page illustrated bulletin.*



COMTOR CO.
73 Farwell Street, Waltham 54, Massachusetts



REQUEST BULLETIN 50

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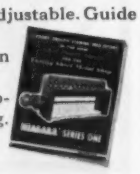
Economical to buy *and operate!* Hairline accuracy! Split second action (85 cuts per minute)! Smooth, lively, full of pep and power! You're looking at the Niagara Series One . . . the thrifty line for work up to 10 gage, 10 feet.

And what a line-up of "big shear" features . . .

INSTANT ENGAGING CLUTCH: Famous Niagara 14 point, multiple jaw sleeve design for uniform timing and rhythmic shear operation.
HI-POWER DRIVE: Completely enclosed . . . clutch, gearing and flywheel operate on anti-friction bearings in a bath of oil.
DIRECT CONNECTED MOTOR: High torque, pancake type. No belts, sheaves, nor belt guards.
RUGGED, WELDED STEEL: Bed, holddown, crosshead, housing legs . . . for utmost strength and rigidity.
CLOSED BOX SECTION: Bed and crosshead. Horizontal, vertical and torsional stresses resisted with minimum deflection.
AUTOMATIC HOLDDOWN: Self-compensating. Applies instant, uniform pressure, holding sheet flat and tight against bed.
PRECISION GAGING: For micrometer accuracy. Easily adjusted.
LAMINATED, NON-METALLIC WAYS: Adjustable. Guide crosshead accurately.
4-EDGE KNIVES: Quadruple service between regrinds. Heat treated, flush-faced.
THERE'S MORE — get the *complete* description. See why you're losing money by waiting. Request Bulletin 73 now . . . *today!*



cost-cutting **NIAGARA** power
squaring shears for sheet metal work

NIAGARA MACHINE & TOOL WORKS • BUFFALO 11, N. Y.
District Offices and Distributors Everywhere

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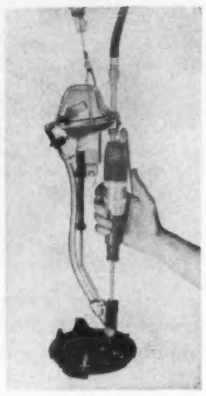
AUTOMATIC SCREW FEEDER for pneumatic and electric tools



Strippit Zipp screw feeder for pneumatic and electrical tools used in vertical screw driving operations automatically feeds and positions all types of screw fasteners. It consists of a hopper and an elevator which picks up the screws, orients, and gravity-feeds them, one at a time, through a plastic tube, with each driving stroke of the tool. Collet which holds screw under driving blade can be modified for close placement of screws, even where screw heads must touch each other. • **Wales-Strippit, Inc.,** 227 Buell Rd., Akron, N. Y.

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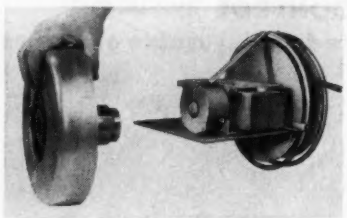
CABLE & HOSE REELS equipped with slip type drive



When supplied with Gleason cable or hose reels using a standard electric motor, the Tormag magnetic drive assures trouble - free service. Coupling can operate at continuous or partial stall at all times without harming either coupling or motor. The frictionless, slip type drive uses permanent Alnico magnets and induced eddy currents to perform its function. Driving and driven rotors are always separated by an air gap. • **Gleason Reel Corp.,** Mayville, Wis.

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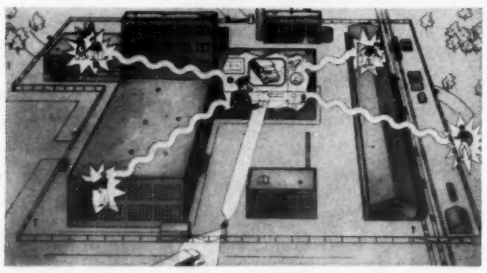
BUILDING SECURITY SYSTEM enables one guard to detect any known security violation

One building guard can supervise plant security from a centralized location with the Electronic Security System. Heart of the integrated system is the security



control center, a compact console on which are a number of pushbutton switches, a two way intercommunications unit, alarm indicating lights, and a 14-in. closed circuit TV screen.

Available detection devices that are mounted in areas to be supervised include fire and smoke, conventional intrusion, electronic noise, and electronic motion detectors; electronic fencing; and automatic door and gate control. Guard receives both audible and visual warning and looks to subsystem panels to identify the particular trouble area.

System can include a tamperproof circuit connected with local police and fire authorities who will dispatch emergency aid if guard fails to give an all-is-well signal at specified intervals. • **Minneapolis-Honeywell Regulator Co.,** 2747 Fourth Ave. S., Minneapolis 8, Minn.

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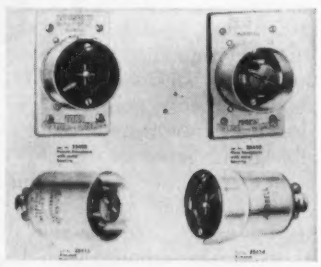
ELECTRIC RECEPTACLES in five-wire locking types



Spring - action, dead-front safety shutter of Hubbellock five - wire electric wiring receptacle confines arcing and keeps out dust, metal filings, and lint. The devices are for four-wire applications requiring an additional equipment ground. Male and female receptacle with metal housing, and an armored cap and body are rated at 30 amp, 600 v ac and 20 amp, 250 v dc. • **Harvey Hubbell, Inc.,** State & Bostwick Streets, Bridgeport 2, Conn.

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SOME CONTAINERS MAY SAVE YOUR LIFE

Lewis Containers WILL save your money

The LEWIS Stack-n-Nest® is the container you can best afford to buy. No other unit will give you more for your dollar . . . through superior design . . . rugged construction . . . and versatile, efficient handling. Every container is handled thousands of times in its lifetime. Based on only 2000 handlings, if Stack-n-Nest Pans can save 10 seconds each time, it amounts to better than 5½ man hours. Translated into dollars and cents, the saving is greater than the initial cost of the average size pan.

Write for complete information.

G. B. Lewis COMPANY
401 MONTGOMERY STREET • WATERTOWN, WIS.

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* If It's New, It's No Doubt Mystik

NEW! 7000-G TAPE for
Extreme Temperature Range —110° to +550° F.

MYSTIK BRAND FIBERGLAS TAPE
with Silicone Adhesives

A new concept in pressure-sensitive tapes—an essentially inorganic pressure-sensitive tape accepted by the aircraft, electrical and electronics industry.

7000-G has a tightly woven, high-tensile Fiberglas® backing with a pressure-sensitive silicone adhesive. Superior thermal and electrical properties make it ideal for many applications previously not possible for pressure-sensitive tape.

(Conforms to Government Specification MIL-1-19166. Approved as Class H Insulation.)

Write for full information on Mystik Brand 7000-G and the complete Mystik line of high and low temperature tapes using silicones with Mylar®, aluminum, copper, and Teflon.

Mystik Adhesive Products, Inc.
2635 North Kildare Ave.
Chicago 39, Illinois

MYSTIK BRAND TAPES SELF-STIK

PACKAGING • PROTECTIVE COVERING • PRINTABLE • ELECTRICAL TAPES

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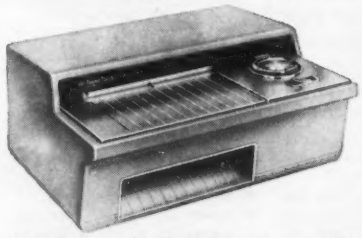
"THERMO-FAX"
Copying Machines



the perfectly dry copying system

FAST . . . all-electric process makes a copy in just 4 seconds. The fastest of all copying methods.
CLEAN . . . no chemicals, no negatives. Makes clean copies directly from most any original.
SIMPLE . . . no special skills required . . . simply press the button—get a copy fast.
VERSATILE . . . simplifies paperwork throughout the office or plant in any system, any department.

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Thermo-Fax COPYING PRODUCTS — 3M COMPANY
MINNESOTA MINING AND MANUFACTURING COMPANY
. . . where research is the key to tomorrow

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Minnesota Mining and Manufacturing Company
Dept. DBQ-10, St. Paul 6, Minnesota

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Address_____
City_____ Zone____ State_____

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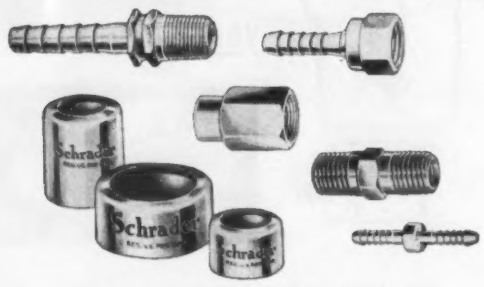
NOW! FITTINGS AND FERRULES FOR AIRTIGHT CONNECTIONS



You can install compressed air systems as easily as electricity. Schrader Airline Fittings, Ferrules and Tools make neat, efficient, professional air installations easy. In addition to the threaded hose fittings and hose ferrules shown here, Schrader also produces the finest air hose, fitted hose lengths, ferrule contracting tools and hose reels... including new air tool hose reels.

These products make positive airtight seals that will not pull or blow out, no sharp edges to catch, scratch or cut. **Send for informative literature which shows all these fine products with specifications and directions for use.**

Schrader®

A. SCHRADER'S SON
Division of Scovill Manufacturing Company, Inc.
459 Vanderbilt Avenue, Brooklyn 38, N. Y.

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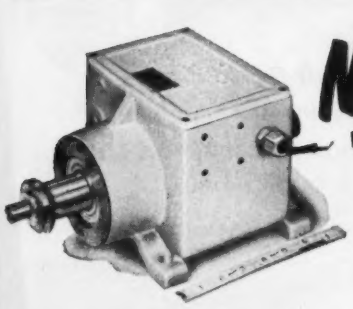


NEW "I.D.U."

HILLIARD'S Complete Package Unit that converts rotary power to precise intermittent motion...

Can be installed on existing equipment, designed into new machinery and re-used after production line changes.

Now you can get a single package unit that gives you precise control of intermittent motions . . . clip and bend . . . shear or slash . . . oscillate or repeat . . . raise or lower . . . index and position . . . from a constantly rotating source of power. The HILLIARD "I.D.U." eliminates the need of buying separate parts and assembling a special "custom" machine with assorted mechanisms to apply and control it.

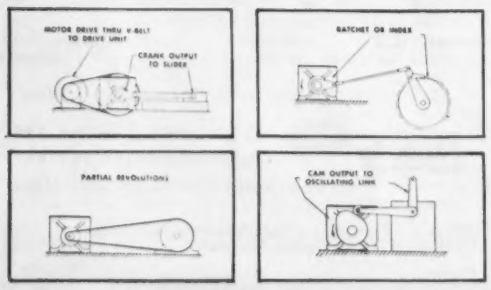
With an "I.D.U." you can mechanize hand or foot operated equipment, modernize or automate existing power operated machines and use it as a "building block" in designing or constructing new machinery or production drives.

The "I.D.U." features highly flexible control, manual, mechanical or electrical, permitting "demand" type operations in fixed or variable cycles. A protected drive, totally enclosed in an oil bath housing, it is ideal for dusty, "steamed" or "wash-down" conditions.

BASIC UNIT PRICE $289.00
Optional Accessories Extra

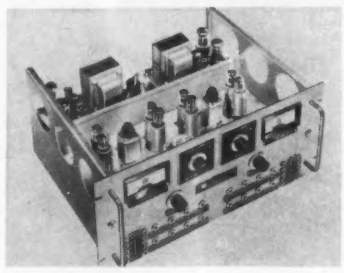
"Intermittent Drive Unit" contains all the parts in one package . . .

- **Can be installed as easily as a motor and needs only electrical connection.**
- **Self-lubricating for long life of 40,000,000 or more cycles.**
- **Operating speed from 40 to 400 R.P.M.**
- **Torque capacity 36 ft. lbs.**
- **No cumulative error in cycling.**
- **Instant engagement.**
- **Mount with direct coupling connection or use with belt, chain or gear drive.**
- *Investigate HILLIARD'S "I.D.U." for your equipment. Write on your letterhead stating your intermittent motion problems and we will provide complete information.*



THE HILLIARD Corporation
40 W. FOURTH ST., ELMIRA, N. Y.
IN CANADA: UPTON-BRADEEN-JAMES, LTD. TORONTO • MONTREAL

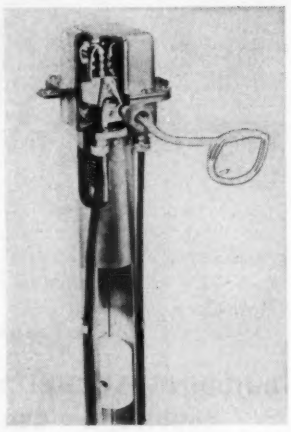
SERVO-CONTROLLER controls any measurable variable



Most frequently applied to electro-hydraulic actuators, Series 800 electronic servo-controller can be used for the control of any electrically measurable variable. Units will fully reproduce the transfer functions described by a typical analog computer. Each unit consists of a controller, servo amplifier, and power supply and is capable of performing summation, integration, and derivative control functions. The dynamic feedback loop components are custom assembled to meet the demands of a system. • **CompuDyne Corp.**, Products Div., 631 S. Warminster Rd., Hatboro, Pa.

▲ For more details circle **NED-509 A** on enclosed inquiry slip ▲

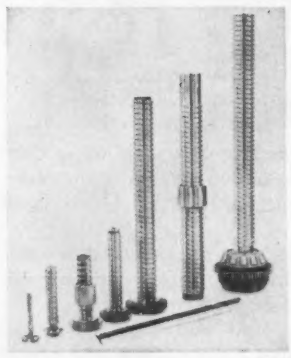
LIQUID LEVEL CONTROL winterproofed model usable outdoors



Ice may form in the outdoor water storage tank in which it is used, but the winterproof Model A-101 liquid level control will continue to follow the true water level and actuate pump controls or alarm circuits. Its switch housing is submersible, and the mercury switch assembly is protected against freezing by vapor-proof construction and a resistance heater. An immersion heater controlled by a thermoswitch prevents freezing in the aluminum displacer tube. Displacers are set to maintain a 36-in. differential between pump start and stop, but this can be shortened in 6-in. increments. • **Magnetrol, Inc.**, 2110 S. Marshall Blvd., Chicago 23, Ill.

▲ For more details circle **NED-510 A** on enclosed inquiry slip ▲

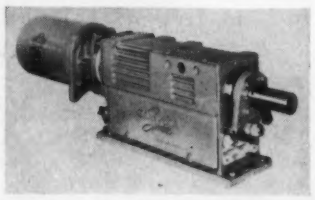
BALL SCREW ASSEMBLIES efficiency exceeds 90 per cent



Use of recirculating ball screw assemblies in heavy machines and other equipment reduces power requirements and allows use of smaller motors, clutches, gearboxes, and electrical controls. They have an efficiency exceeding 90 per cent and a pitch accuracy up to 0.0002 in. per foot. The Super-Cision screws have a vernier adjustment for preloading to eliminate backlash. Designed for each application, they have shaft diameters from 1/4 to 5 in. and can be made in lengths up to 40 ft. • **Scully-Jones & Co.**, Special Products Div., 1901 S. Rockwell St., Chicago 8, Ill.

▲ For more details circle **NED-511 A** on enclosed inquiry slip ▲

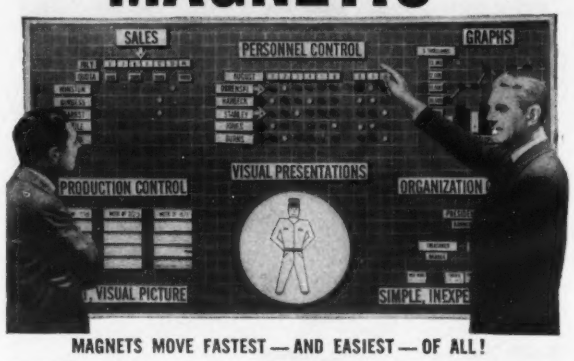
AUTOMATIC DRILL UNIT for up to 500 lb-in. torque



Usable in engineered automatic production machines, Model 17-400 automatic drill unit with smooth air-hydraulic operation affords fast adjustment for rapid advance, length and rate of feed, and total stroke length. Provision is made for back feed with independently adjustable rate, and for skip drilling and dwell control. Unit can be supplied with direct, pulley gear, or pulley-driven gear drives powered by 1/3 to 5-hp motors for torques up to 500 lb-in. It measures only 24 in. long, 9 1/8 in. high, and 5 1/2 in. wide. • **Hartford Special Machinery Co.**, 287 Homestead Ave., Hartford 12, Conn.

▲ For more details circle **NED-512 A** on enclosed inquiry slip ▲

VISUAL MAGNETIC CONTROL



MAGNETS MOVE FASTEST — AND EASIEST — OF ALL!

SIMPLEST VISUAL SYSTEM FOR
- Production
- Personnel
- Sales
- Maintenance
- Scheduling
- Machine Loading
- Charts—Graphs
- Visual Presentations

COLORFUL MAGNETIC ELEMENTS
- show facts instantly
- organize for action
- eliminate mistakes
- get the job done

PRICED FROM **$38** INCLUDING MAGNETIC ELEMENTS

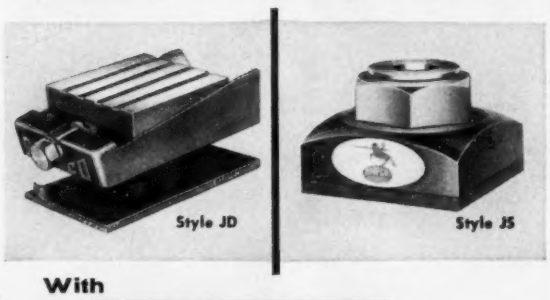
PRICE LIST & BROCHURE NET **FREE** ON REQUEST

REPRESENTATION DESIRED IN SOME AREAS

Methods Research Corp.
105 Willow Ave., Staten Island 5, New York

▲ For more details circle **NED-513 A** on enclosed inquiry slip ▲

DEPENDABLE MACHINE SUPPORT!



With

EMPCO

LEVELING JACKS

For better machine performance set your machines level and keep them level! That's the key to increased production with less maintenance! EMPCO Leveling Jacks provide a solid, adjustable support for machine tools, large surface plates, tool room, and production equipment of all types. Easily installed and located, EMPCO Jacks keep your equipment level and stable—keep maintenance at a minimum.

VI-SORB Mounting Pads, optional with EMPCO Jacks, control vibration from within the machine itself and reduce transmitted vibrations. Available in six styles and 25 models there's a EMPCO Jack and VI-SORB Mounting Pad for your every machine leveling requirement!

WRITE TODAY FOR ILLUSTRATED BULLETIN AND PRICES!

EMPCO PRODUCTS

THE ENTERPRISE MACHINE PARTS CORPORATION
2727 JEROME AVENUE • DETROIT 12, MICHIGAN

▲ For more details circle **NED-514 A** on enclosed inquiry slip ▲

•The "Force Gage" of many test standards.

with precision, direct reading Hunter Mechanical Force Gages*—Series L type in 13 models for measuring load ranges from 0-500 grams to 0-30 pounds and Series D type in 6 models for measuring load ranges from 0-50 pounds to 0-500 pounds. Both types are accurate to better than 1% of full scale, can be provided with a "hold-at-maximum" indicator for registering maximum load, come complete with six attachments and wood carrying case. Thousands are now in use in laboratories, inspection departments, on production lines, and in the field. Send for Bulletin 750c containing full details including prices.

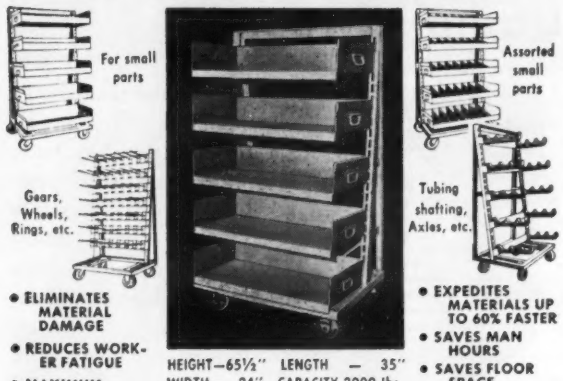
HUNTER Gauges for Spring

HUNTER SPRING COMPANY
A Division of American Machine and Metals, Inc.
14 Spring Avenue, Lansdale, Pennsylvania

▲ For more details circle **NED-515 A** on enclosed inquiry slip ▲

THE VER-T-RACK

THE ACME OF VERSATILITY



- ELIMINATES MATERIAL DAMAGE
- REDUCES WORKER FATIGUE
- MAXIMUM EFFICIENCY AT MINIMUM COST

HEIGHT—65½" LENGTH — 35"
WIDTH— 24" CAPACITY 2000 lbs.

- EXPEDITES MATERIALS UP TO 60% FASTER
- SAVES MAN HOURS
- SAVES FLOOR SPACE
- GREATER SAFETY FACTOR

Equipped with 6" roller bearing steel wheel casters

VER-T-RACK can be handled with lift truck. Trays are adjustable on VER-T-RACK

PRICE — $49.50 Varied Accessories Extra

Slightly higher west of the Rockies Write today for descriptive literature

THE Vince BASNIK COMPANY
MATERIAL HANDLING DIVISION
• 2020 CENTER STREET • CLEVELAND 13, OHIO

▲ For more details circle NED-516 A on enclosed inquiry slip ▲

NEW FROM WHITING

PRESSUREGRIP vacuum lifter

Versatile Whiting Pressuregrip vacuum systems pick up even rough textures, like diamond tread plate, plywood, or concrete. Special narrow grippers are available to lift rails, beams, or even pipe.

UNDER-THE-HOOK PRESSUREGRIP UNITS (shown above) speed overhead crane operation—eliminate time-consuming chain rigging—cut materials handling costs.

CUSTOM PRESSUREGRIP VACUUM FEEDING EQUIPMENT can be designed to your requirements. Whiting engineers are at your service to automate many repetitive operations.

WRITE TODAY FOR NEW BULLETIN V-100
"Whiting Pressuregrip"

Whiting Corporation, 15660 Lathrop Avenue, Harvey, Illinois

WHITING

▲ For more details circle NED-517 A on enclosed inquiry slip ▲

SAFE STEPLADDER of glass fiber reinforced plastic

Lightness in weight and high strength are achieved in this line of stepladders by making them of glass fiber reinforced plastic. They are particularly safe for industrial use and in power and electrical work. Even when tested in humidities of 50 per cent, there is no breakdown when 120,000 v was applied to the rungs. Flat steps and rungs are aluminum, and safety shoes are standard. Ladders are made in 3 to 18-ft sizes in 1-ft increments. All sizes above 3 ft have a pail rest. • **Putnam Rolling Ladder Co.**, 32 Howard St., New York 13, N. Y.

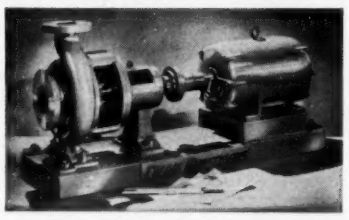
▲ For more details circle NED-519 A on enclosed inquiry slip ▲

REMOTE CONTROL NEEDLE VALVE diaphragm actuated for 10,000 psi

Operated with air pressure of 50-psi, Model 4888 remote control needle valve is suited for up to 10,000-psi fluid service. The 200:1 ratio nylon and Buna-N diaphragm actuator can be controlled by an electric solenoid valve for open and close use, or a solenoid valve with a low pressure regulator for metering and pressure relief applications. Carbon steel construction is available for noncorrosive fluids and stainless steel for corrosive service. Sizes range from ⅛ to ½-in. NPT and 4 to 8 AND 10050 tubing. • **Dragon Engineering Co.**, Box 185, Norwalk, Calif.

▲ For more details circle NED-520 A on enclosed inquiry slip ▲

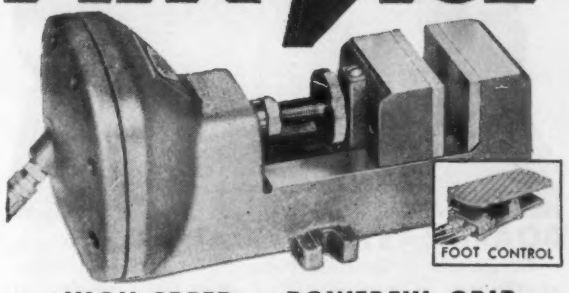
CHEMICAL PROCESS PUMPS in 5 to 500-gpm capacities



Fourteen sizes comprising the pH line of chemical process pumps cover a capacity range from 5 to 500 gpm at heads from 20 to 260 ft. Pumps handle liquids with temperatures ranging from −350 to 350° F, depending upon which of 17 different corrosion-resistant alloys they are made. Bearings will last two years operating at maximum radial and thrust loads. Single piece shaft has limited radial deflection of 0.002 in. Pumps are easily dismantled for servicing and have wide interchangeability of parts. • **Dean Brothers Pumps Inc.**, 323 W. Tenth St., Indianapolis 7, Ind.

▲ For more details circle NED-521 A on enclosed inquiry slip ▲

Speedy AIR VISE



HIGH SPEED • POWERFUL GRIP

New, improved model speeds up all repeat operations—*milling, drilling, tapping, punching, bending, riveting.* Both hands left free to produce more! Light squeeze to 2250 pounds pressure! Extra thick jaws for attaching jigs. Jaws open to 3-inches; 1/16" to 5/8" maximum travel. Complete with foot control, air hose and fittings..... **$44.00**

SPEEDY AIR REGULATOR Regulates pressures 0 to 140 lbs. No. 622 $7.25

SPEEDY AIR FILTER Assures clean, oil-free air. No. 140 $4.00

SPEEDY UNIT Production spray unit with Ext. Mix Gun. No. 705 $26.50

Order from Your Supplier or Write for Air Tool Catalog

W. R. BROWN CORP., 2647 N. Normandy Ave., Chicago 35

AIR TOOLS • AIR VISES • AIR REGULATORS • FILTERS • COMPRESSORS

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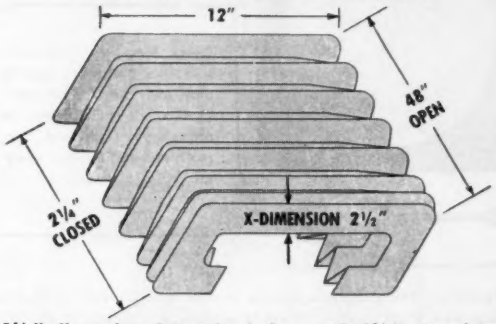
PROTECTION *5 times more!*

FOR WAYS AND CROSS RAILS FABRICATED FROM NEOPRENE



the 2½" dimension determined the small, 2¼" closed length. Variations in this "X" dimension govern the closed lengths.

WAY-PROTECTORS

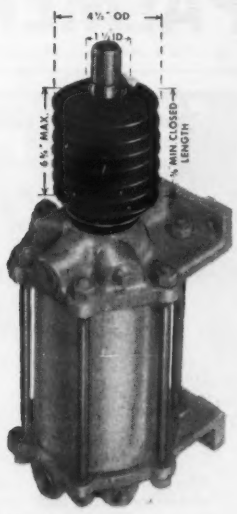
high maximums
low
minimums

SLEEVES

1 or 1000
without
molds

BOOTS

for dirt
exclusion
and
lubricant
retention



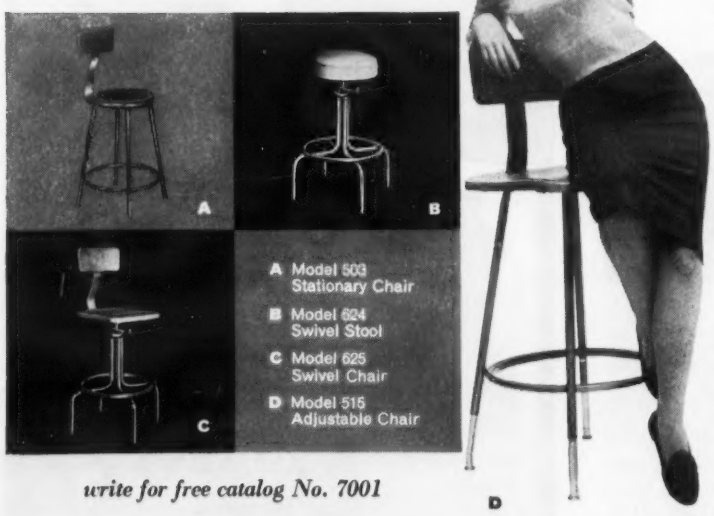
ALL SHAPES AND CONTOURS

ALL GORTITE protection is fabricated from a neoprene-base material which is impervious to oil, grease, dust, dirt, sand, chemicals and abrasives. Protectors will flex at temperatures ranging from −40° F., to 220° F., without cracking. Ask for bulletin AH-3.

A&A MFG. COMPANY INC.
712 S. 12th Street Milwaukee 4, Wisconsin

▲ For more details circle NED-523 A on enclosed inquiry slip ▲

Royal® INDUSTRIAL SEATING



write for free catalog No. 7001

speeds production and improves efficiency

Worker alertness saves money in many ways—greater output, fewer rejects, less spoilage—and there's no better cure for mid-afternoon slump than right-posture *Royal* seating . . . the chairs and stools that last longer, look better, because that's the way *Royal* builds them.

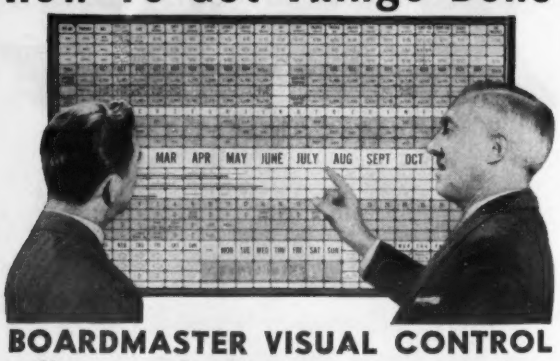
ROYAL ORIGINATED POSTURE-SEATING FOR INDUSTRY

In the 29 *Royal* models, there's one just right for every job . . . at machines or assembly benches . . . for drafting, stock, and shipping rooms . . . in shop offices. Fixed or adjustable heights. Exclusive Royal *Micro-Hite* control. 4-way adjustable chair backs. Contour, flat, or padded seats. Look to *Royal*, too, for metal storage cabinets and the world's finest office seating.

ROYAL METAL MANUFACTURING CO.
One Park Avenue, New York 16, N. Y., Dept. 41A

▲ For more details circle NED-518 A on enclosed inquiry slip ▲

How To Get Things Done



BOARDMASTER VISUAL CONTROL

Gives you a Graphic Picture of your operations, spotlighted in color. You See what is happening at a glance. Facts at eye level—saves you time, prevents errors.

Simple, flexible—easily adapted to your needs. Easy to operate. Type or write on interchangeable cards, snap in grooves. Ideal for production, scheduling, sales, traffic, inventory, etc. Made of metal. Compact, attractive.

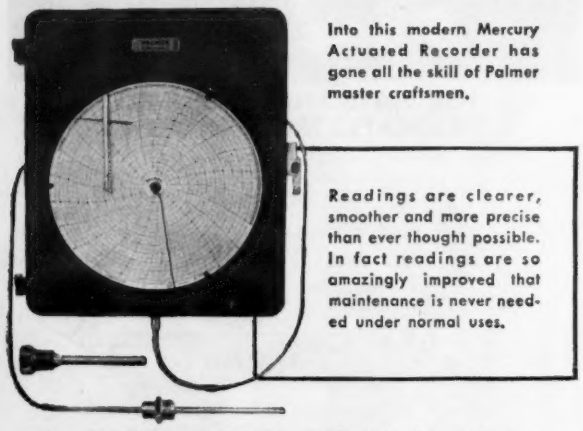
Complete Price $49.50 Including Cards

FREE 24-Page Illustrated Booklet N-400 Mailed Without Obligation

GRAPHIC SYSTEMS Yanceyville, North Carolina

▲ For more details circle NED-524 A on enclosed inquiry slip ▲

PALMER MERCURY ACTUATED recorders



Into this modern Mercury Actuated Recorder has gone all the skill of Palmer master craftsmen.

Readings are clearer, smoother and more precise than ever thought possible. In fact readings are so amazingly improved that maintenance is never needed under normal uses.

Recording Thermometers feature twelve inch die-cast aluminum case with black wrinkle or white satin finish. Single or multiple pen construction. Electric or spring wound clock. 24 hour or 7 Day Revolution. Flexible Armor and bulb of stainless steel. Ranges —40 to 1000°F. or Equivalent in °C.

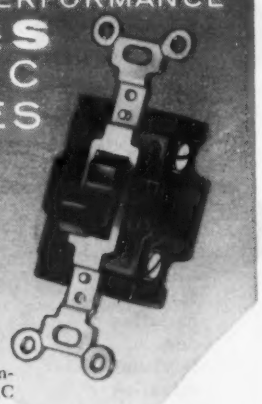
Send for Bulletin No. 45

Consult your Classified Directory

PALMER THERMOMETERS, INC. Mfrs. of Industrial Laboratory, Recording and Dial Thermometers **Cincinnati 12, O.**

▲ For more details circle NED-525 A on enclosed inquiry slip ▲

FOR SUPER PERFORMANCE
GET P&S SUPER AC SWITCHES



For Extra Long Life at Full Rated Load Maximum Service Quiet Operation

Finest materials and rugged construction make P&S Super AC Switches ideal for heavy duty usage. They can be easily installed in any position and are adaptable for back and side wiring. Underwriters' Laboratories, Inc., approved to full current rating on fluorescent (inductive) and incandescent lighting loads and on motors to 80% of switch rating.

P&S Super AC Switches are totally enclosed; have large silver alloy contacts that prevent overheating; single pole, double pole, 3-way and 4-way . . . 15 and 20 Amps., 120V and 277V AC, and many other features.

Write for complete information to Dept. NED-160

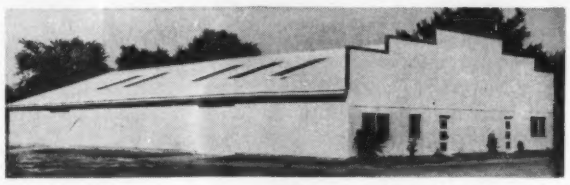
P&S PASS & SEYMOUR, INC. SYRACUSE 9, NEW YORK

60 E. 42nd St., New York 17, N.Y. 1440 N. Pulaski Rd., Chicago 51, Ill. In Canada: Renfrew Electric Co., Ltd., Toronto, Ontario

▲ For more details circle NED-526 A on enclosed inquiry slip ▲

INDUSTRIAL BUILDINGS clear-span, insulated construction

Clear-span buildings for small industrial or commercial operations are made of factory-built insulated panels surfaced inside and out with Masonite hardboard.



Buildings range in size to 60 x 400 ft on Cuckler steel frames and to 40 x 400 ft with trussed rafters. Cost of about $3.50 per square foot includes a concrete floor, finished office and double wash rooms. Smaller buildings, under $2 per square foot, include a concrete floor. Standard 4 x 8-ft wall panels with built-in 3-ft doors and windows are joined with a shiplap Z-joint or a tongue-and-groove joint. Roof has 3 in. of insulation and the walls, 2 in. • **Masonite Corp.**, 111 W. Washington St., Chicago 2, Ill.

▲ For more details circle NED-527 A on enclosed inquiry slip ▲

SUBMERSIBLE PUMP is portable UL-approved 1/3-hp unit

Fully approved by Underwriters' Laboratories, Inc., general purpose Model 109 submersible pump is suitable for a wide range of drainage and fluid handling operations. It will operate submerged in sumps or tanks, and can be used in systems handling such liquids as water, lubricants, and coolants. This packaged 42-lb pump is rated 3300 gph at 10-ft head. The direct-drive bronze impeller is driven by a 1/3-hp single phase motor which has a thermal overload protector with an automatic reset switch. It is available nonautomatic for continuous or separately controlled operation, or fully automatic. • **American Crucible Products Co.**, Kenco Pump Div., 1305 Oberlin Ave., Lorain, Ohio.

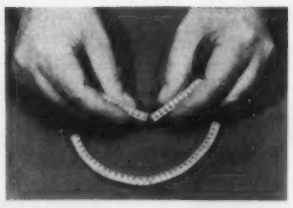
▲ For more details circle NED-528 A on enclosed inquiry slip ▲

PROPORTIONING PUMP dispenses corrosive chemicals

Made of corrosion resistant materials, Model 1331 diaphragm type Chem-O-Feeder pump accurately proportions such corrosive chemical concentrates as 66-degree Baume sulfuric acid, sodium hydroxide, phosphoric acid, and photographic solutions. Stroke length of the electrically driven pump is adjustable while in motion. It is floor, shelf, or wall mounted and draws directly from the shipping container. Range is over 4 to 1 with capacity up to 0.7 gph into discharge pressures up to 100 psi. Foot valve, injection nozzle, connecting hoses, and instructions are furnished. • **B-I-F Industries, Inc.**, 345 Harris Ave., Providence 1, R. I.

▲ For more details circle NED-529 A on enclosed inquiry slip ▲

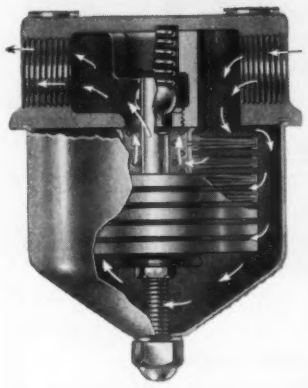
WIRE & TUBING MARKERS available in continuous lengths



Series of durable polyvinyl chloride markers for wire, cable, and pressure or control tubing comply with various military and civil specifications. Beta Type Z cable marker of 0.125 to 0.500-in. bundles in a one-piece, completely closed, flexible unit with expandable pleat for rapid manual or automated assembly, offered in continuous lengths of 50, in bags, or on magazine reels of 250, 500, or 1000 units. Diameters larger than 1/2 in. utilize flat 3/8 x 9/16-in. Beta Type S strap-on markers with a wire strip clip offered in 165-ft coils. Black, white, blue, green, yellow, and red colors are offered in both types in letters from A to Z, numerals from 0 to 9, and special symbols. • **Electrovert Inc.**, 124 E. 40th St., New York 16, N. Y.

▲ For more details circle NED-530 A on enclosed inquiry slip ▲

CLEANABLE MICROMAZE LIQUID FILTER



• Now, the cleanability and long life of an all metal filter has been combined with extremely small particle removal. The Air-Maze liquid filter is available in many degrees of filtration, down to 5 microns. Constructed of specially processed wire mesh, filtering media is arranged in form of multiple discs which afford over six times more effective area than the same size cylinders. Built-in relief valve optional. Sizes from 1.7 to 720 gpm. Write for bulletin LFC-556. **AIR-MAZE CORPORATION**, Dept. NE-1, Cleveland 28, Ohio. (Subsidiary of ROCKWELL-STANDARD Corporation.)

▲ For more details circle NED-531 A on enclosed inquiry slip ▲

PEAK EFFICIENCY FOR YOUR MACHINE THROUGH PRODUCTION CONTROL AND PREVENTATIVE MAINTENANCE with the VDO TACHOGRAPH

What is the Tachograph?
This instrument records in chart form *when* and *how fast* any machine operated or how long it took to complete a process.

What does the Tachograph do?
This precision instrument keeps a running record of how fast your equipment has been operating at any given time and total time.

How can the Tachograph help you?— The VDO Tachograph locates and corrects bottlenecks by helping to relocate men and equipment to areas of necessity. Usable for time studies and to evaluate and reduce costs.

OTHER ENGLER INSTRUMENTS

HOUR METER . . . AC-DC

Electrically registers hours and minutes of engine operation. For use on any powered equipment — DC powered rolling stock or stationary machines on AC line current.

PRODUCTOLOG . . .

Electrically records in chart form off and on time of any machine or process. Shows on chart exactly when down time occurred and for how long. Access window enables operator to write in the reason for stoppage.

Engler Instrument Co.

Dept. NE-1, 280 Culver Avenue Jersey City 5, New Jersey

▲ For more details circle NED-532 A on enclosed inquiry slip ▲

how to trap dust

that damages your machines and hurts company morale

Easy-to-move **TORIT** dust collectors trap dust at its source!

Untrapped dust costs money: "secretly" forces precision machines out of line, limits production. Torit dust collectors are unitized for custom installation—save more money, usually more efficient than central (built-into-building) system. Torit unit operates only when machine or combination of machines it protects are on. Filtered air may be returned to room to save heat. Many models and sizes, all self-contained, easy to move. Write today to . . .

TORIT *manufacturing co.*

Dept. 201, 1133 Rankin St., St. Paul 16, Minn.

▲ For more details circle NED-533 A on enclosed inquiry slip ▲

Kling MILL-ALL

for high speed facing of structural steel shapes, plates, forging and castings!

- All structural shops can afford this extra powerful, high speed machine . . . Available in numerous sizes.
- Has exceptional accuracy . . . Gives high quality finish.
- All welded steel construction
- Ball screw feeds
- More power
- Cutter mounted on motor shaft
- Simple to operate

WRITE for full information and Bulletin MA-1

KLING BROS. ENGINEERING WORKS
1320 N. KOSTNER AVENUE • CHICAGO 51, ILLINOIS
Export Distributor: Simmons Machine Tool Corp., 50 E. 42nd St., New York 17
Exclusive Canadian Distributor: Rudel Machinery Company, Limited

▲ For more details circle NED-534 A on enclosed inquiry slip ▲

CUT COSTS with FIR PLYWOOD

Switch from metal to fir plywood tote boxes has eliminated damage to precision optical and electrical parts at Bell & Howell—and also maintained efficient handling procedures set up by plant process engineers. The new nail-glued plywood boxes are light, strong and durable—and the wood has enough resilience to prevent damage to delicate parts. At one point, boxes travel through de-greasing bath without harm. Over 50,000 are now in use.

Only plywood with DFPA grade-trademarks is made and tested under industry-wide Douglas Fir Plywood Association quality control program. Look for letters DFPA on the panel.

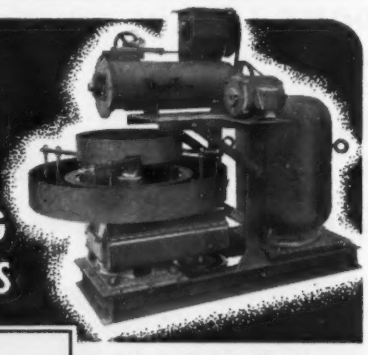
DFPA TESTED QUALITY

Write for New File Folder Catalog

DOUGLAS FIR PLYWOOD ASSOC., DEPT. 181, TACOMA 2, WASH.

▲ For more details circle NED-535 A on enclosed inquiry slip ▲

NEW SOLUTION To Your PELLETING PROBLEMS



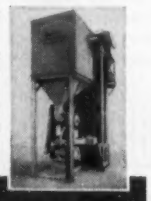
Daffin PELLETING MACHINERY

GREATER OUTPUT AT LOWER COST

Pellets of SUPERIOR uniformity, density, firmness, with or without steam and binders. From ⅛" to 1" diameter—lengths to 2" or more—round and other shapes—coarse or fine materials.

Unique, new, simplified design. Easier, more economical to operate, maintain. Special stationary die, horizontal head. Alloy construction as required. Daffin engineers will help develop exclusive pellet processing system tailored to your operation. WRITE FOR BULLETIN L-109

Complete plant within 50 sq. ft.



Daffin MANUFACTURING COMPANY
INDUSTRIAL DIVISION
3953 NORTH PRINCE STREET • LANCASTER, PA.

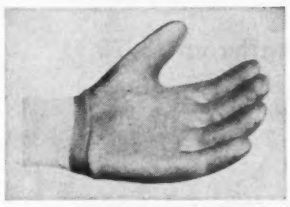
▲ For more details circle NED-536 A on enclosed inquiry slip ▲

TWO-WAY PORTABLE RADIO
compact unit weighs only 8 lb

Instant two-way radio communication with personnel on foot is provided by the Portacom portable FM radio. Weighing only 8 lb, the 12-in. long unit is available with loudspeaker and palm microphone for use on 25-54 mc and 144-174 mc frequencies. Included are handset, FM receiver, one or two-channel FM transmitter, demountable whip antenna, battery pack, and carrying strap. Power output exceeds 1 w on the lower frequencies. • **Allen B. Du Mont Laboratories, Inc.**, 750 Bloomfield Ave., Clifton, N. J.

▲ For more details circle NED-537 A on enclosed inquiry slip ▲

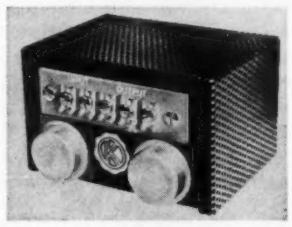
WORK GLOVES
bright color aids signaling



Called Glo-Gluvs because of their bright Day-Glo color, these work gloves provide spot identification for workers involved in hazardous work. They also aid in signaling, such as giving directions to crane operators, and the brilliant hue helps prevent loss. Sample pair is offered free upon written request. • **Granet Corp.**, 25 Loring Dr., Framingham, Mass.

▲ For more details circle NED-538 A on enclosed inquiry slip ▲

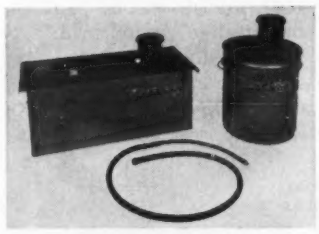
TRANSISTORIZED POWER SUPPLIES
operate in −55 to 60° F range



Compact, lightweight, high capacity transistorized power supplies for use in mobile communication, marine navigation, aircraft, and portable electronic equipment operate at 80 per cent efficiency or more. Model CA-1263-12, on input of 12.6 v dc, delivers output of 600/300 v dc, 200/400 ma current, and 120-w power. Model CA-12105-10 is rated 1000/500 v dc, 100/200 ma current, and 100-w power. Units are instant starting, quiet, and will operate in −55 to 60° C range. Both have heavy anodized chassis, and a perforated cover. • **Kupfrian Mfg. Corp.**, 386 State St., Binghamton, N. Y.

▲ For more details circle NED-539 A on enclosed inquiry slip ▲

COOLANT SYSTEMS
consist of pumps and containers



Drill presses, lathes, grinders, saws, abrasive belts, and other types of machines requiring coolant are applications for the Wesco coolant pump unit. Usable with various types of coolants, they are offered with 1/20 to ½-hp motors and 5, 12, and 40-gal containers. Units can also be built to order. • **Wesco Tool, Inc.**, 2820 San Fernando Blvd., Burbank, Calif.

▲ For more details circle NED-540 A on enclosed inquiry slip ▲

LEFT-HAND TAP SET
contains 10 high speed steel taps

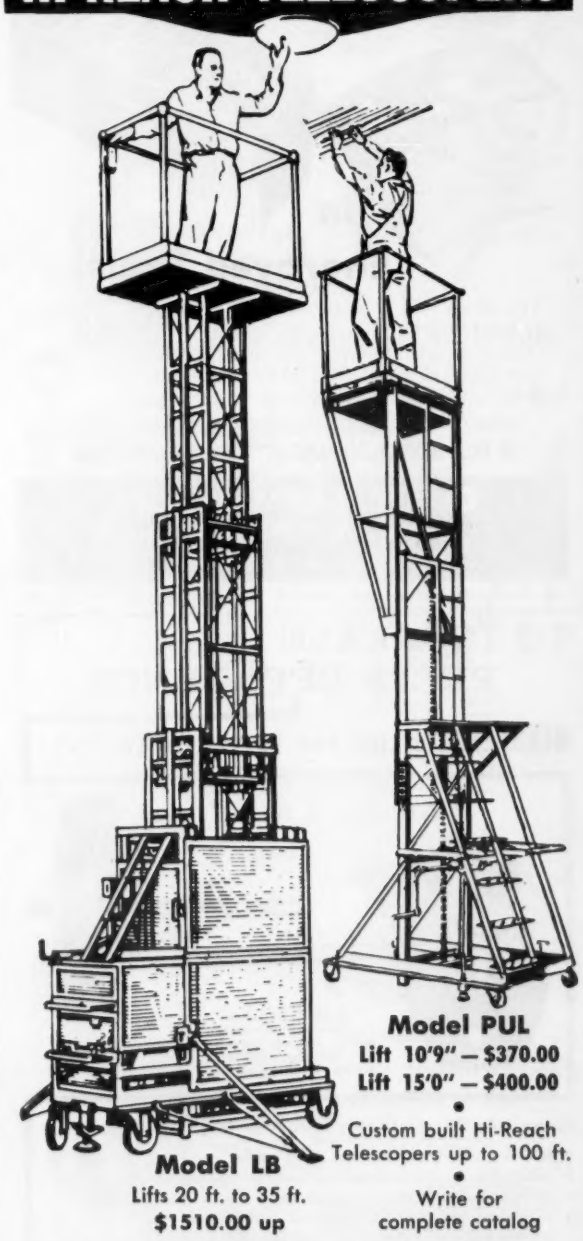
Made of high speed steel with ground threads, this standard set of left-hand taps includes ¼ to ½-in. sizes in both National Coarse and National Fine threads. The set, with a wooden box for storage, sells for $30. Also offered are 25 additional special tap sizes, including the 8, 12, and 16-pitch series from 1 to 2 in., and 0.002, 0.003, and 0.005-in. oversize machine screw sizes, also of high speed steel with ground threads. • **DoALL Co.**, 254 N. Laurel Ave., Des Plaines, Ill.

▲ For more details circle NED-541 A on enclosed inquiry slip ▲

Facts on flex and expansion joints . . . that can save you maintenance and expenses are detailed in this bulletin. Send for your copy. Write Dept. 417, RESISTOFLEX CORPORATION, Roseland, N. J.

▲ For more details circle NED-542 A on enclosed inquiry slip ▲

OVERHEAD SERVICING is Faster and Safer with HI-REACH TELESCOPERS



Model PUL
Lift 10'9" — $370.00
Lift 15'0" — $400.00
•
Custom built Hi-Reach Telescopers up to 100 ft.
•
Write for complete catalog

Model LB
Lifts 20 ft. to 35 ft.
$1510.00 up

Headquarters for standard and special built overhead servicing lifters and material handling equipment since 1901.

ECONOMY ENGINEERING
4519 W. Lake St., Chicago 24, Illinois

▲ For more details circle NED-543 A on enclosed inquiry slip ▲

Kerotest has been producing highest quality valves for the past 50 years. Our new catalog gives dimensions, specifications and working tables to help you specify the right valves for your applications.

WRITE FOR YOUR COPY—Today!

KEROTEST®

KEROTEST MANUFACTURING COMPANY
2522 Liberty Avenue, Pittsburgh 22, Pa.

In Canada, Kerotest products are manufactured and distributed exclusively by Guelph Engineering Company, Guelph, Ontario.

▲ For more details circle **NED-545 A** on enclosed inquiry slip ▲

Specify the Best in Engraved Tools

The quality of your product deserves equal quality in your marking.
Our complete inventory of alloy steels permits instant selection to meet your requirements.
Style of lettering is tailored to your job.
Quotations furnished promptly upon request.

IF IT'S WORTH MAKING, IT'S WORTH MARKING.

GEO. T. SCHMIDT, INC.
1800 W. Belle Plaine Avenue
Chicago 13, Illinois

▲ For more details circle **NED-546 A** on enclosed inquiry slip ▲

TO INCREASE PRESS EFFICIENCY

MINSTER® CLUTCHES FOR PRESS CONVERSIONS

Here's why it is profitable to convert to Minster Clutches:

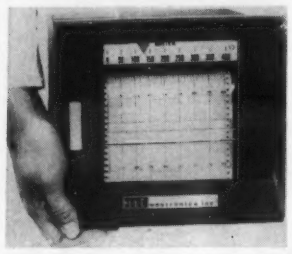
- Eliminates down time because of clutch failure
- Reduces maintenance by eliminating costly and frequent parts replacement
- Increases die life because of smooth, shock-free clutch engagement
- Reduces operator fatigue and improves safety because press is easier to operate, easier to control
- More productive cycles per hour on single cycle operation
- Easier, more rapid die setting

Bulletin CC 57 describes Minster Clutches for press conversion. Copy by request on company letterhead.

THE MINSTER MACHINE COMPANY
MINSTER, OHIO

▲ For more details circle **NED-547 A** on enclosed inquiry slip ▲

STRIP CHART RECORDER
plots 12 variables on 5-in. chart

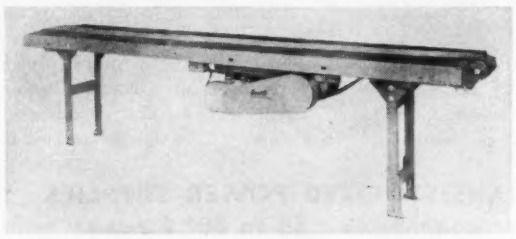


Temperature, pressure, electric output, flow, and voltage are but a few of the variables that can be recorded with this Model M5 multipoint strip chart recording potentiometer. Up to 12 variables can be plotted on the 5-in. strip chart by scanning and sampling, and each variable is identified at its position by a number or a number and a point, printing with multiple or single colors. Standard printing rate is 5 sec per point. Instrument operates on 115-v ac through a zener diode reference power supply. Chart can be pulled out for inspection, and it re-rolls automatically. Various calibrations and chart speeds are offered. ● **Westronics, Inc.**, 3605 McCart St., Ft. Worth 10, Tex.

▲ For more details circle **NED-548 A** on enclosed inquiry slip ▲

ASSEMBLY TABLE
conveyorized lengths up to 75 ft

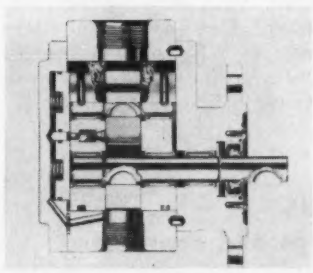
Table top of the Beltable conveyorized assembly table is adjustable transversely so that work can be performed on either or both sides. It consists of a flat



belt conveyor with table top on adjustable legs. Lengths up to 75 ft are offered with variable speeds from 5 to 120 fpm in a 3 to 1 ratio, or in several ranges of constant speed. Table is suited for processing, assembly, sorting, inspecting, or similar types of work. ● **Standard Conveyor Co.**, 315 N. W. Second St., North St. Paul 9, Minn.

▲ For more details circle **NED-549 A** on enclosed inquiry slip ▲

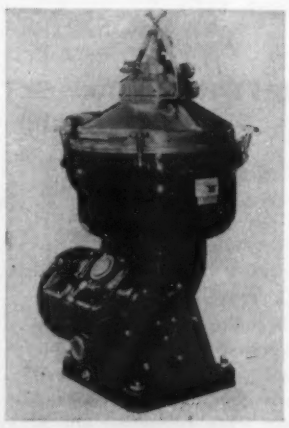
GEAR PUMPS
deliver uniform flow at any load



Pressure compensated gear pumps are built for 3000-psi constant pressure or 4500-psi intermittent pressure service. They deliver uniform flow regardless of variations in fluid viscosity or load. Needle bearings contained in a pair of one-piece bearings will not misalign under load. A rear floating bearing block automatically takes up wear and maintains zero end clearance. Capacities of 5, 10, 15, and 30 gpm are standard and up to 100 gpm are special. ●**Superior Pipe Specialties Co.**, Superior Hydraulics Div., 15201 St. Clair Ave., Cleveland 10, Ohio.

▲ For more details circle **NED-550 A** on enclosed inquiry slip ▲

SEALED CENTRIFUGE
clarifies many materials safely

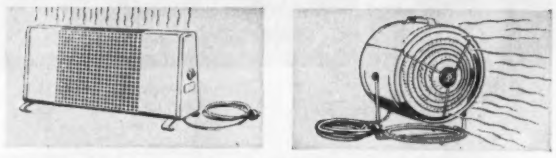


Air-free operation at pressures to 125 psi is assured by Model SRG-214 hermetic centrifugal separator. Capacity ranges to 5000 gph. It will separate or clarify viscous or inflammable materials, or products which must be kept from contact with air. This disc type centrifuge has long-life seals at inlet and outlet so that feed material is maintained under positive pressure. All parts of this 20-hp machine are stainless steel, except the frame. Drive can be direct or through V-belt. The 24-in. diameter bowl rotates at 4400 rpm. ● **De Laval Separator Co.**, Industrial Div., Poughkeepsie, N. Y.

▲ For more details circle **NED-551 A** on enclosed inquiry slip ▲

For portable use or for permanent installation . . .

Get quick comfort for hard-to-heat areas: G-E space heaters can be delivered today



General Electric space heaters of both natural convection and forced convection types are now available for quick delivery from your nearby G-E distributor. General Electric space heaters are:

EASY TO INSTALL: Just mount them on the floor, wall or ceiling and plug them in. You have immediate heat for drafty areas and buildings not serviced by your heating plant. No plumbing is required.

CLEAN: General Electric heaters give off no odors, dirt, soot, or obnoxious gases. Quick, clean heat is available at the turn of a switch.

READILY PORTABLE: Sturdily constructed but light in weight, General Electric space heaters can be moved easily from one place to another.

FREE BULLETINS

For more information, write Section 723-33, General Electric Company, Schenectady 5, N. Y., and ask for GEA-6361, HANDY SELECTOR GUIDE FOR HEATING ROOMS OR BUILDINGS, and GEC-1005 CATALOG OF GENERAL ELECTRIC HEATERS AND DEVICES.

GENERAL ELECTRIC

▲ For more details circle **NED-552 A** on enclosed inquiry slip ▲

INSURE *Proven Quality* with JONES PLUGS AND SOCKETS

P-306-CCT Plug, Cable Clamp in Cap.

Jones Series 300 illustrated. Small Plugs & Sockets for 1001 Uses. Cap or panel mounting.

S-306-AB Socket with Angle Brackets.

- Knife-switch socket contacts phosphor bronze, cadmium plated.
- Bar type Plug contacts brass, cadmium plated, with cross section of 5/32" by 3/64".
- Insulation molded bakelite.
- All Plugs and Sockets polarized.
- Metal Caps, with formed fibre linings.
- Made in two to 33 contacts.
- For 45 volts, 5 amperes. Efficient at much higher ratings where circuit characteristics permit.

Ask for Jones Catalog No. 22 showing complete line of Electrical Connecting Devices, Plugs, Sockets, Terminal Strips. Write or wire today.

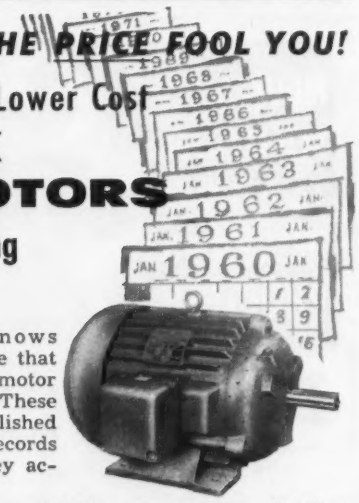
Jones

HOWARD B. JONES DIVISION
CINCH MANUFACTURING COMPANY
CHICAGO 24, ILLINOIS
DIVISION OF UNITED-CARR FASTENER CORP.

▲ For more details circle **NED-553 A** on enclosed inquiry slip ▲

DON'T LET THE PRICE FOOL YOU!

Despite Their Lower Cost BROOK A.C. MOTORS Give Outstanding Service!



Anybody who knows motors will recognize that there is no finer motor than the Brook. These motors have established excellent service records in industry. Yet, they actually **cost less!**

Space age production methods and extensive distribution in 76 countries makes possible this better motor at lower cost. All standard enclosures. 1 to 600 H.P. Start saving now—look into Brook Motors at once. Write for literature and name of your dealer.

SINCE 1904
BROOK ELECTRIC MOTORS

"World's Most Respected Motor"

BROOK MOTOR CORPORATION
3302-04 W. Peterson Ave., Chicago 45, Ill.

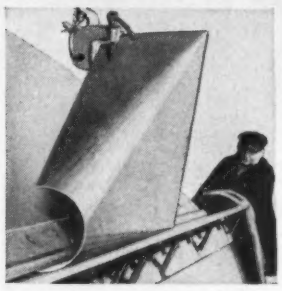
Factory Representatives, Warehouses, Dealers, Serv. Stations, in Major Cities in Canada:
Brook Electric Motors of Canada Ltd., 250 University Ave., Toronto, Ont.

▲ For more details circle **NED-554 A** on enclosed inquiry slip ▲

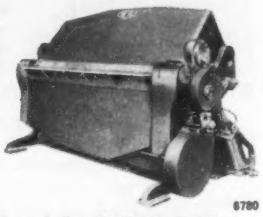
Bending Steel Plates for WELDMENTS?

do it economically with

CHICAGO® BENDING BRAKE



The elimination of die costs and the ease of changing from one job to another make the CHICAGO bending brake the economical method for bending steel plates for weldments. An automatic stop regulating the degree of bend assures duplication on successive pieces.



Many standard sizes are available with capacities for bending mild steel up to 12 feet by ¾ inch or 16 feet by ½ inch.

6780

For details on how to do it, ask for Bulletin P-55

CHICAGO DREIS & KRUMP · Press Brakes · Straight-Side-Type Presses · Press Brake Dies · Hand and Power Bending Brakes · Special Metal-Forming Machines

DREIS & KRUMP MANUFACTURING CO.
7436 South Loomis Boulevard, Chicago 36, Illinois

▲ For more details circle NED-555 A on enclosed inquiry slip ▲

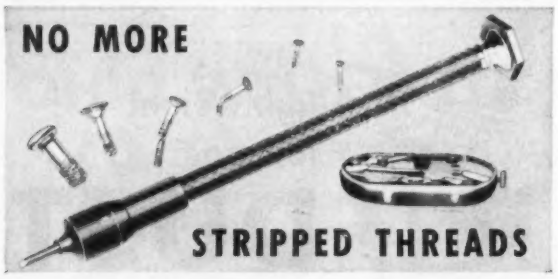
with this PORTABLE timesaver BANDSAW

Zip through both ferrous and non-ferrous metals – even tool and stainless steels. Handles 3¼" x 4¼" rectangular stock, ¾" dia. round stock ... well balanced, easy to use ... 6.5 amp. universal motor, blade moves at 240 sfpm. Ask your Porter-Cable distributor or write for a demonstration.

PORTER-CABLE MACHINE COMPANY
6121 Marcellus Street
Syracuse 4, N. Y.

Porter-Cable Quality Power Tools

▲ For more details circle NED-556 A on enclosed inquiry slip ▲



...OR BUCKLED AND BROKEN MOVEMENT PLATES
...RUINED PRECISION ASSEMBLIES AND FINDINGS

Apco Mossberg's New Tiny Torque Screwdriver lets you control those delicate tiny torques from 0 to 3 tenths of an inch-ounce, or from 0 to 6, 8, or 10 tenths of an inch-ounce!

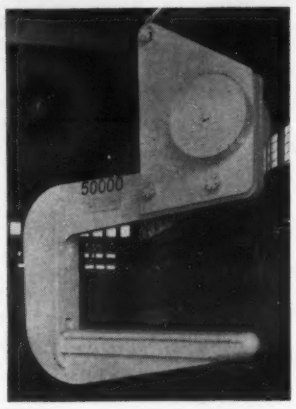
A Precision Jeweler's-Type Screwdriver, Tiny Torque "fits the hand," enables even the inexperienced to tighten tiny screws without shearing threads, cramping gears, fragile parts.

Designed for #0 to #2-56 screws, and for #0 to #4 screws using interchangeable hardened screwdriver blades. Only 4¾" long. Easy-to-read white, etched graduations on barrel. Write for Details!

APCO MOSSBERG COMPANY
161 Lamb Street, Attleboro, Mass.

▲ For more details circle NED-557 A on enclosed inquiry slip ▲

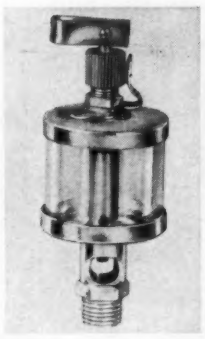
C-HOOKS & TONGS offered in range of sizes



Line of C-hooks, vertical coil tongs, sheet and plate lifters, and other material handling devices for a variety of metalworking applications is available with and without power-operated features. All models are offered in a wide range of capacities and sizes. • **Hill Acme Co.**, 1201 W. 65th St., Cleveland 2, Ohio.

▲ For more details circle NED-558 A on enclosed inquiry slip ▲

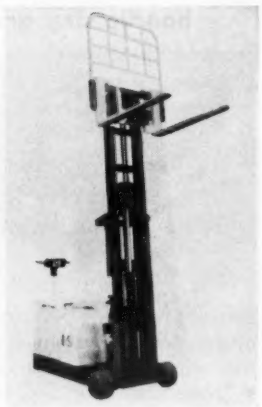
SIGHT-FEED OILER in capacities from 1/3 to 32 oz



Constructed of brass, Type 100 sight-feed oilers are adjustable from an occasional drop to a fine stream, with the rate of feed clearly visible in the sight-feed window. A spring-locked knurled nut gives easy flow adjustment, and a snap lever starts and stops the feed. These easily maintained oilers are made in 10 reservoir capacities from ⅓ to 32 oz with ⅛ to ¾-in. shank threads. Pyrex glass reservoirs withstand temperature extremes. Plexiglas reservoirs are optional. • **Federal Brass Mfg. Co.**, 809 W. Second St., Elmira, N .Y.

▲ For more details circle NED-559 A on enclosed inquiry slip ▲

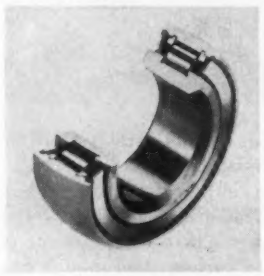
STACKING TRUCK is walkie type



Good visibility of forks is provided by the low silhouette of the counterbalanced walkie type Jackstacker industrial truck. It is powered by a 24-v industrial battery and heavy duty 24-v components. The low design also enables the operator to ride the truck by sitting on the battery compartment. • **Lewis-Shepard Products, Inc.**, Dept. R9-38, 125 Walnut St., Watertown 72, Mass.

▲ For more details circle NED-560 A on enclosed inquiry slip ▲

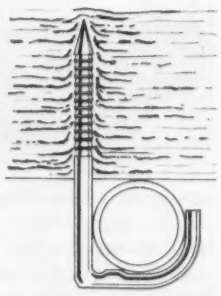
SEALED BEARING made for abrasive environments



Buna-N, steel-backed, rubber-bonded seal of the UM-5209-B-103 roller bearing prevents abrasive action on the rollers and races by excluding dirt and dust. Lifetime lubricated bearing has 21 crowned rollers, a 1.750-in. ID, 3.3465-in. OD, and a dynamic capacity of 13,500 lb. Designed for farm equipment application, it is one of a line for use in abrasive environments. • **Rollway Bearing Co.**, 541 Seymour St., Syracuse 4, N. Y.

▲ For more details circle NED-561 A on enclosed inquiry slip ▲

TUBE & CABLE STAPLES available in four sizes



Water tube and pipe, electric cable, and conduit can be supported in any position with Silnic bronze tube staples. Made of high strength nickel silicon alloy, they drive easily without breaking. Annular threads grip wood fibers to resist loosening and pulling out. Staples are offered in ¼, ⅜, ½, and ¾-in. nominal sizes for ⅜, ½, ⅝, and ⅞-in. OD tube, respectively. • **Chase Brass & Copper Co.**, 236 Grand St., Waterbury 20, Conn.

▲ For more details circle NED-562 A on enclosed inquiry slip ▲

FACTS you should know about

Airless spraying

Q: *Where is airless spraying best used?*
A: Indoor and outdoor painting maintenance work because there is virtually no overspray.
Q: *Does Binks make airless spraying outfits?*
A: Yes. These rugged, dependable outfits are available for working from 55- or 10-gallon containers.
Q: *Why see Binks first about airless?*
A: Binks gives you the opportunity to objectively compare airless spraying with a number of other techniques.

Ask your Binks industrial distributor for Binks Bulletin A98-7, or write direct

9830

Binks EVERYTHING FOR SPRAY PAINTING

Binks Manufacturing Co.
3122-34 W. Carroll Ave.
Chicago 12, Ill.

REPRESENTATIVES IN PRINCIPAL U.S. & CANADIAN CITIES · SEE YOUR CLASSIFIED DIRECTORY

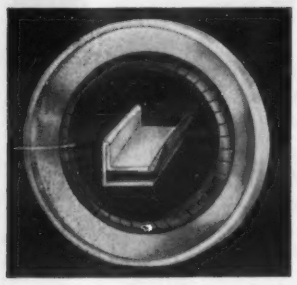
▲ For more details circle NED-563 A on enclosed inquiry slip ▲

Ask your industrial supply house, or write —

THE WOOD SHOVEL & TOOL CO.
PIQUA, OHIO

▲ For more details circle NED-564 A on enclosed inquiry slip ▲

OIL SEALS in Design Engineering



Garlock KLOZURE* Oil Seals do a complete job of protecting bearings — they seal in vital lubrication, seal out harmful dirt and foreign matter. KLOZURES are oil and grease resistant . . . impervious to water, mild acids, alkalies . . . nonabrasive and free running . . . withstand temperatures from −40°F to +250°F constant, +300°F intermittent. Other sealing elements available for resisting extremely reactive fluids in temperatures as high as +500°F.

*Registered Trademark

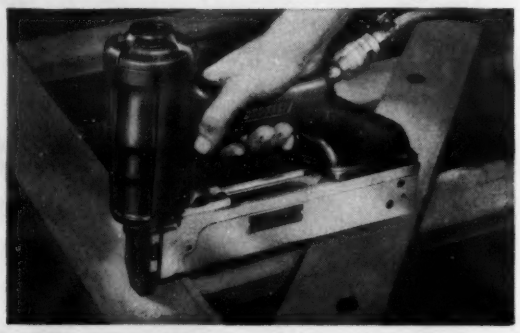
Get complete details from one of our 26 sales offices and warehouses throughout the U.S. and Canada, or write for KLOZURE Catalog 30, The Garlock Packing Company, Palmyra, N. Y.

GARLOCK

Canadian Div.: The Garlock Packing Co. of Canada Ltd.
Plastics Div.: United States Gasket Company
Order from the Garlock 2,000 . . . two thousand different styles of Packings, Gaskets, Seals, Molded and Extruded Rubber, Plastic Products.

▲ For more details circle NED-570 A on enclosed inquiry slip ▲

NEW! the *DUO-FAST* S-762 Staple Gun



5 times faster than hand nailing!

Staple-nailing with this new S-762 is speedy, automatic, efficient. It wallops home heavy, 16-gauge staples, as long as 1½", at 60 pounds air pressure.

Use this portable, one-hand staple-nailer on crates, assembling boxes, making expendable skids, and many other nailing jobs. It's a money saver!

Send for Bulletin FT-43 on the new, fully guaranteed DUO-FAST S-762 Staple Gun. Just one of the 150 DUO-FAST models.

DUO-FAST / FASTENER CORPORATION
3758-60 River Road
Franklin Park, Ill.
9558

▲ For more details circle NED-571 A on enclosed inquiry slip ▲

Use MOTO-TRUC

Moto-Truc pallet trucks are built to handle loads in tight places where larger trucks bog down. The standard model — PAL is only 28" longer than the load while the special short-coupled model — PAL-SC is only 24" plus load.

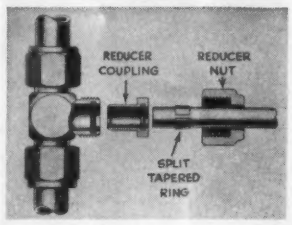
Able to turn in their own length, these tough little walkies are ideal for handling in freight cars, trucks, elevators, narrow warehouse aisles and crowded production areas.

WRITE TODAY . . . For full information on Moto-Truc pallet trucks.

The MOTO-TRUC Co.
1961 E. 59th STREET • CLEVELAND 3, OHIO

▲ For more details circle NED-572 A on enclosed inquiry slip ▲

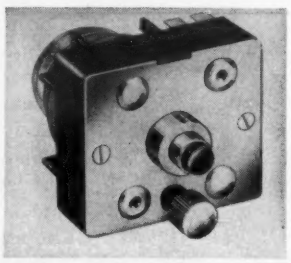
REDUCER COUPLING
for hydraulic, vacuum, air service



Standard fitting, plus a reducer coupling with nut and split tapered ring, comprise the O-Ring-Seal reducer coupling for hydraulic, vacuum, and pneumatic systems. The seal remains leakproof under shock and vibration conditions. Reducer is applicable to tubing of any thickness, and can be disassembled and reused in unions, elbows, tees, crosses, and bulkhead connections, making possible line reductions on any leg. • **Lenz Co.**, Dept. N-169, 3301 Klepinger Rd., Dayton 1, Ohio.

▲ For more details circle NED-573 A on enclosed inquiry slip ▲

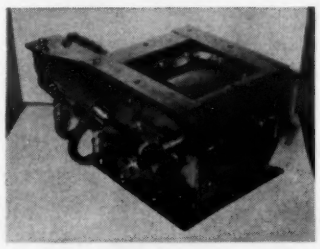
INTERVAL TIMER
with 30-sec to 120-min intervals



Series AT-36 pushbutton actuated, adjustable interval timer is a totally enclosed, motor-driven device designed for use in controlling fans, vending machines, mixers, photocopying, and other equipment. Switch unit is rated 28 amp, or 1 hp at 250 v ac. The UL-approved timer is available for 120 or 240 v operation at 50 or 60 cycles with adjustable interval ranges of 30 sec, 1, 5, 10, 30, 60, or 120 min. • **General Time Corp.**, Haydon Div., 245 E. Elm St., Torrington, Conn.

▲ For more details circle NED-574 A on enclosed inquiry slip ▲

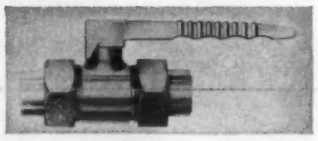
AIR-OPERATED BIN GATES
handle dry granular materials



Completely dust tight, air-operated bin gates for handling dry granular materials from storage bins and hoppers, are offered in stainless or carbon steel construction. Large capacity design minimizes chance of material bridging. Gates feature neoprene seals, large access doors, and machined rotors, and are available for manual or remote electric-pneumatic control. • **Stone Conveyor Co.**, Honeoye, N. Y.

▲ For more details circle NED-575 A on enclosed inquiry slip ▲

BALL VALVE
¼ to 2-in. sizes offered



Interchangeable ends of this ball valve are adaptable to screwed, socket weld, butt weld, flanged, and Victaulic connections. Delrin throttling handle is color coded, and adjustable stuffing box can be repaired under pressure. Valve has Teflon seals and can be on-flow in either direction. Sizes from ¼ to ¾ in. have 1000-psi rating, and sizes from 1 to 2 in. are rated at 600 psi. Temperature range is −300 to 400° F. Stainless and carbon steel models are now available. • **Cooper Alloy Corp.**, Bloy Street & Ramsey Avenue, Hillside 5, N. J.

▲ For more details circle NED-576 A on enclosed inquiry slip ▲

VARIABLE SPEED DRIVE
two speeds independently controlled

Zero-Max Dual variable speed drive consists of a ⅓-hp double shaft motor with a Zero-Max infinitely variable, 0 to 400-rpm speed control on each end. An optional reversing feature provides rotation in either direction to the full speed range on one or both ends. Fourteen models have torque ratings at each output shaft of 10, 15, or 20 lb-in. Optional gearhead increases the torque limit of the 10 lb-in. model to 50 lb-in., or the top speed to 2000 rpm. Smallest model is 12 x 5 x 6 in. • **Zero Max Co.**, 1900 Lyndale Ave. S., Minneapolis 5, Minn.

▲ For more details circle NED-577 A on enclosed inquiry slip ▲

New Variable speed sheave won't freeze, needs no lube

Wood's new "SVS" stationary control, multiple groove sheave has positive locking collars which eliminate fretting corrosion, freezing and sticking. It needs no lubrication . . . permits accurate, simple and infinitely variable speed control . . . is easily installed, accurately balanced to assure smooth operation and long drive life . . . uses standard v-belts and stock companion sheaves. Drive range is from 10 to 150 hp.

SVS/960

write for bulletin 6102

T. B. WOOD'S SONS COMPANY
CHAMBERSBURG, PENNSYLVANIA

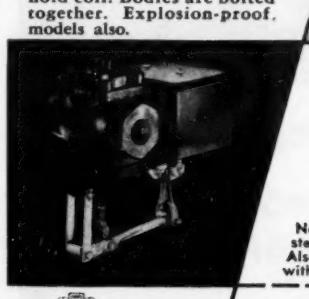
ATLANTA • CAMBRIDGE • CHICAGO • CLEVELAND • DALLAS

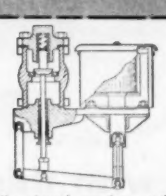
▲ For more details circle NED-578 A on enclosed inquiry slip ▲

BIG LINE-UP BIG PERFORMANCE

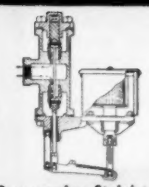
Johnson Solenoid Valves are built for heavy duty service . . . handling, air, water, steam, heavy viscous liquids. No pilots or pistons; powerful leverage design opens smaller valves against 250 lbs. Because of the remoteness of the solenoid, temperatures up to 400° F. are easily handled without adverse effect on the solenoid coil. Bodies are bolted together. Explosion-proof models also.

JOHNSON Direct Operated SOLENOID VALVES

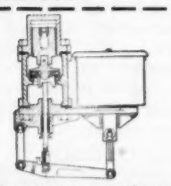




Normally closed service, stainless steel valve and seat. Sizes ⅜"-3". Also for normally open service, and with Jenkins Disc.



3-way valve. Stainless steel valves and seats. Sizes ½"-1½".

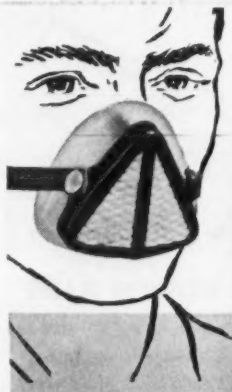


Dashpot construction, cushions closing to avoid water hammer. Jenkins Disc. Sizes ¾"-2".

Write for Bulletin "V"

THE JOHNSON CORPORATION
812 Wood St., Three Rivers, Mich.

▲ For more details circle NED-579 A on enclosed inquiry slip ▲



new . . .
lightweight
low-cost
DUST PROTECTION

Pulmosan
RESPIR-ETTE (Trade Mark)
The "ounce of prevention" against nuisance dusts and paint overspray

The Respir-ette mask weighs less than one ounce, provides protection at minimum cost. One-size plastic body fits all faces comfortably and does not interfere with the wearing of spectacles. It's washable and non-irritating. New throw-away filters are easily replaceable, inexpensive and efficient. Respir-ette . . . an inexpensive mask to protect against nuisance dust and paint overspray.

Write for details.

PULMOSAN SAFETY EQUIPMENT CORP.
644 Pacific Street, Brooklyn 17, N. Y. Sterling 9-0200
1007 Washington Ave., St. Louis, Mo. Chestnut 1-9393

▲ For more details circle NED-580 A on enclosed inquiry slip ▲

UNISORB LEVEL-RITE

Machinery Mounting

Now! A universal, self-contained leveling mount for all types of machines. Precise leveling, load ratings up to 7500 lbs. per unit.

- Exclusive screw-post quickly and surely levels machine, compensates for uneven or pitched floors.
- No bolts, lag screws or cement required, machines are always mobile.
- Saves up to 80% in installation time.
- Superior Unisorb vibration dampening reduces up to 85% of transmitted vibration. Less noise, easier to work, less building maintenance.
- Unisorb is long wearing, resilient, impervious to oils and cutting compounds.

Send for new Unisorb Bulletin and price list, today.

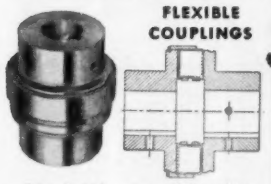
UNISORB Division of The FELTERS Company | 224 South St., Boston 11, Massachusetts FE9-9

▲ For more details circle NED-581 A on enclosed inquiry slip ▲

LOVEJOY POWER TRANSMISSION EQUIPMENT

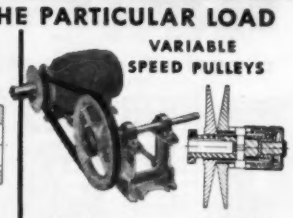
JOB-RATED FOR THE PARTICULAR LOAD

FLEXIBLE COUPLINGS



Bores (max.).....5/16" to 9½"
O.D. .....⅝" to 21½"
Wt. .....½ oz. to 1500 lb.
H.P. .....1/20 to 4250
Torque (static).1½ to 5100 ft.-lbs.

VARIABLE SPEED PULLEYS



Bores (max.).....½" to 1⅜"
O.D. .....3" to 13⅜"
Belt Sizes.....A to 2¾ TW
Speed Ratios.....1-1 to 8-1
H.P. (1750 rpm.).....¼ to 15

SHAFT MOUNTED GEAR REDUCERS

18 Models From Stock
Speeds.....8 to 425 R.P.M.
H.P. .....Fractional to 120
Ratios.....Single 4.5:1 Nominal
Double 14.7:1 Nominal
Hollow Shafts.....1⅞ to 5⅝ in.

UNIVERSAL JOINTS

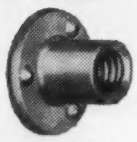
Bores.....¼" to 2"
Hub Dia. .....½" to 4"
Static Torque
340 to 130700 in.-lbs.
H.P. (100 rpm.).....½ to 207

REQUEST FULL INFORMATION NOW

LOVEJOY FLEXIBLE COUPLING CO.
4803 WEST LAKE STREET • CHICAGO 44, ILL.

▲ For more details circle NED-582 A on enclosed inquiry slip ▲

OHIO WELD NUTS



RH NUT
Thread Size 6-32 to ⅜-16

WF NUT
Thread Size 6-32 to ⅜-16

SF NUT
Thread Size 5/16-18 to ½-13

WW NUT
Thread Size 6-32 to ⅜-16

OHIO flanged weld nuts provide extra-long thread engagement and are ideal for assemblies requiring strong primary fasteners. They can also serve as spacers or bearing surfaces where required.

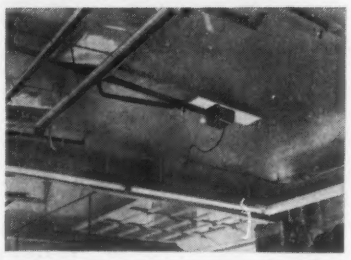
Samples and information furnished upon request.

The Primary Fastener in Fastener Assemblies

THE OHIO NUT AND BOLT CO.
14 FIRST STREET BEREA, OHIO

▲ For more details circle NED-583 A on enclosed inquiry slip ▲

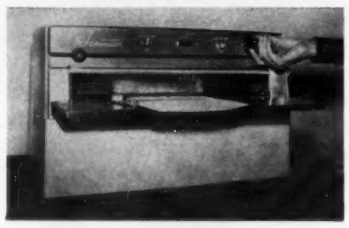
OVERHEAD DOOR OPERATOR
automatic unit for oversize doors



Lifting force of 250 lb, sufficient to operate oversize sectional or solid overhead doors up to 10 ft high by 20 ft wide, is furnished by the Genie Model 410 door operator. Successive operations of a single control button cause the door to open, stop, reverse direction, and close. It also automatically unlocks and locks the door and turns lights on or off. A built-in safety feature automatically stops the door upon any slight interference. One of two radio controls is a 9-oz transistorized, battery-operated portable unit which activates the operator from 50 ft away. Other is an under-the-hood mounted transmitter, powered by car or truck battery, with a 75-ft range. • **Alliance Mfg. Co.**, Alliance, Ohio.

▲ For more details circle NED-584 A on enclosed inquiry slip ▲

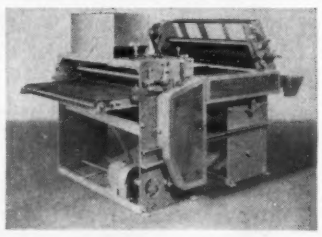
PLASTIC FILM LAMINATOR
seals originals in transparent film



Controllable thermo-dial heat range of 120 to 380° F and a varibale processing speed from 12 to 25 fpm are built into the Model 1-17-D Auto-therm Laminator. Paper, chipboard, cover stock, and most originals are sealed into any type of film or acetate for protection against stains, grease, acids, rough handling, and tampering. Slow speed operation permits laminating extra-thick originals. Any material up to 17 in. wide by any length up to the 2000-ft film roll capacity can be encased automatically. • **General Binding Corp.**, 1101 Skokie Highway, Northbrook, Ill.

▲ For more details circle NED-585 A on enclosed inquiry slip ▲

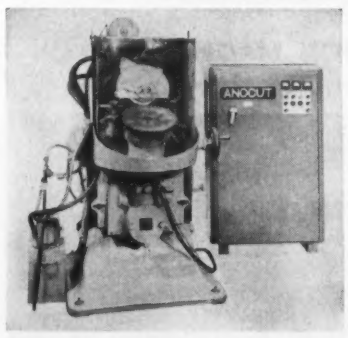
ROLLER COATER
applies high viscosity materials



Upper applicator roll of the Model CG roller coater is hinge-mounted so that it is easily opened for cleaning. Machine applies materials or compounds of high viscosity. By "ironing" them onto the applicator roll the problem of stringy compounds is minimized and foaming is eliminated. Roller coaters can be used in tandem where extra heavy coatings are required, or when a conditioner must be applied to the work prior to the final coating. Machines are offered in various widths with variable speed drive and explosionproof controls. • **Murray-Way Corp.**, Maple Road E., Birmingham, Mich.

▲ For more details circle NED-586 A on enclosed inquiry slip ▲

FACE MILL GRINDER
uses electrolytic process



Savings in diamond wheels, long cutter life, good workpiece finish, and minimized grinding runout on the face mill result from using this automatic electrolytic face mill grinder. It grinds the lead angle, corner radius, face radius, dish, and soft steel backing of inserted teeth in an automatic cycle. Tooth shape is controlled by a cam arrangement. Machine cycle time on a given tooth averages 29 sec producing an 8 microinch finish. Four machine sizes accommodate face mill diameters from 4 to 21 in. The automatic indexing face plate can be set for eight or more teeth. Hydraulic machine uses a 300-amp Anocut electrolytic unit or equivalent and is set up in 5 to 10 min. • **Oliver Instrument Co.**, 1442 E. Maumee St., Adrian, Mich.

▲ For more details circle NED-587 A on enclosed inquiry slip ▲

Speed Tying Operations!

★ Cheaper than String
★ Faster than Tying
★ Sure Grip
★ Colorful

NO KNOTS TO TIE!

Cut your tying time in half! Hanscom-Ties are the fast, sure way to bundle wires, cords, coils, etc. Nothing to tie. Just wrap 'em around and twist. For temporary or semi-permanent holding. Available in cut lengths 1" to 24" and on spools — bright colors or printed. Prices from 26c per thousand. WRITE FOR SAMPLES and TRY 'EM YOURSELF.

H.F. Hanscom & Co., Inc.
15 Virginia Avenue
Providence 5, R.I., U.S.A.

Top view of Hanscom-Tie is shown. Bottom is flat

Hanscom-Ties

▲ For more details circle NED-588 A on enclosed inquiry slip ▲

FLAMELESS BLOW TORCH

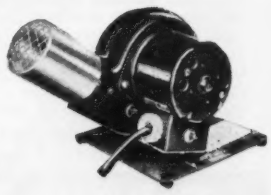
FOR QUICK HEAT UP TO 1000° F.

For applications requiring quick concentrated heat blast up to 1000° F. without flame. Soften, form, mold and patch plastics, etc. Temperature varied by air intake adjustment. 110-120 V. AC-DC motor, 8 ft. heavy duty cord. Intermittent duty. $37.50.

Other models available with lower temp. ranges

Most of the big names in industry use MASTER in laboratories or in production

AIR HEATER BLOWER



For quick electrically heated air up to 500° F. For accelerating drying processes or for localized heating. B.T.U. 3400. Air velocity 2000 FPM. 110-130 V. AC only. 8 ft. heavy duty cord. Continuous duty. 2" dia. x 3" long discharge nozzle.

Order through your local laboratory or industrial supplier or direct.
300° F.—1000 Watts $37.50
500° F.—1400 Watts $39.50

MASTER Appliance Corp., Racine, Wisconsin

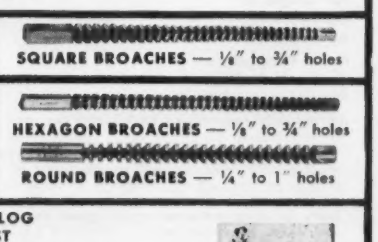
▲ For more details circle NED-589 A on enclosed inquiry slip ▲

STANDARD BROACHES CUT COSTS

Minute Man KEYWAY BROACH KIT

In one minute and for as little as one cent you can cut a keyway with the Minute Man Keyway Broach Kit. For keyways from 1/16" to 1" in any bore from ¼" to 3".

SAVE WITH THESE OTHER STANDARD STOCK BROACHES



SQUARE BROACHES — ⅛" to ¾" holes
HEXAGON BROACHES — ⅛" to ¾" holes
ROUND BROACHES — ¼" to 1" holes

SEND FOR CATALOG AND PRICE LIST
The duMont Corp.
Greenfield, Mass.

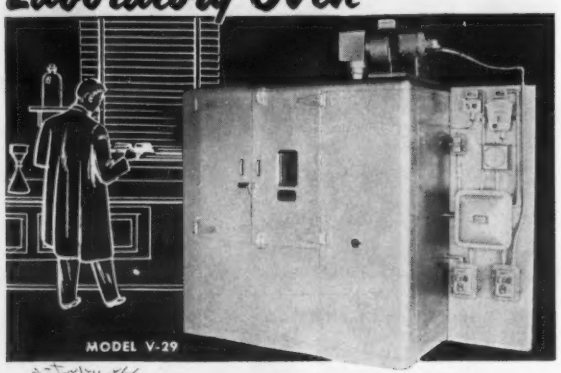
MAIL FREE BROACH CATALOG AND PRICE LIST D describing Square Broaches, Hexagon Broaches, Production Type Keyway Broaches and Keyway Broach Kits to

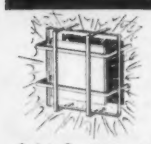
Name.....
Company.....
Address.....

duMont

▲ For more details circle NED-590 A on enclosed inquiry slip ▲

NEW DESPATCH SAF-T-BILT *Laboratory Oven*





Safety Features—encased explosion relief panel on back of unit. Safety chain on front door plus safety door latch. Forced exhaust system dissipates volatiles. Heavy duty observation glass window. Available in work chamber sizes to 37" x 25" x 37".

Available with Temperatures 500°F—650°F—850°F

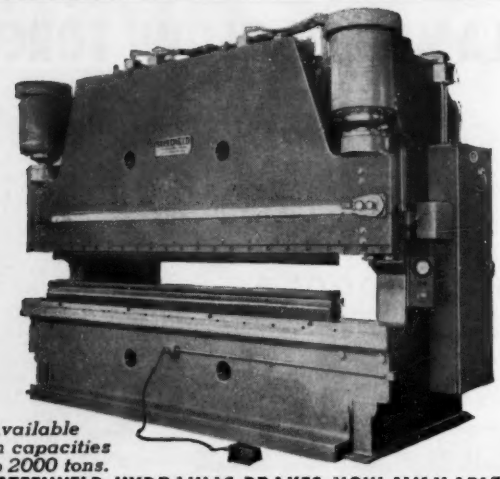
Precision engineered to give temperature uniformity in the work chamber. Saf-T-Bilt Laboratory Ovens provide fast pre-heat and recovery to speed heat process operation. Available with temperatures to 500° F—650° F—850° F. Where safety is a factor Saf-T-Bilt Ovens can become completely explosion proof by substituting steam or hot water for electrical heat. Model illustrated is electrically heated.

Write today for complete catalog of laboratory ovens.

DESPATCH OVEN CO.

DESPATCH OVEN CO. 611 S. E. 8th Street, Minneapolis, Minn.

▲ For more details circle **NED-591 A** on enclosed inquiry slip ▲



Available in capacities to 2000 tons.

STEELWELD HYDRAULIC BRAKES NOW AVAILABLE

A complete line of Steelweld Hydraulic Press Brakes with the finest features that assure accuracy and outstanding performance is now available by one of the oldest and most experienced press brake builders. The new hydraulic line supplements but does not supplant Steelweld mechanical press brakes.

Get the details on versatile feature-packed Steelweld Hydraulic Press Brakes. Ask for Catalog No. 2024A.

THE CLEVELAND CRANE & ENGINEERING CO.
6670 EAST 281st STREET, WICKLIFFE, OHIO

STEELWELD *HYDRAULIC* PRESS BRAKES

▲ For more details circle **NED-592 A** on enclosed inquiry slip ▲

VIBRA-WASHER

. . . THE COMPLETELY NEW AUTOMATIC PARTS WASHER AND METAL CONDITIONING MACHINE

- Labor saving
- Automatic unloading
- For single or multi-stage operations
- No nesting of parts during cleaning or conditioning cycle
- Adjustable capacities to 10,000 lbs. per hour

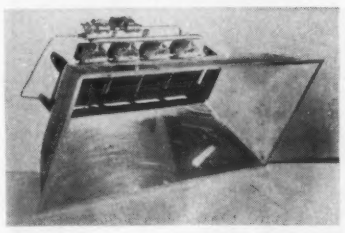
The versatile new Simplicity VIBRA-WASHER, revolutionary machine for washing and conditioning of small metal parts, stampings and castings, employs a vibrating work carrier that automatically conveys parts through cleaning or conditioning bath. Solution is forced around parts, even into blind drillings and slots. In single stage, VIBRA-WASHER removes chips, oil and grease quickly . . . economically. In multi-stage, several units in line will provide cleaning, rinsing and phosphating, eliminating "between-stage" handling. Write today for Bulletin 107, to: Industrial Washer Division.

Simplicity TRADE MARK REGISTERED

212 ENGINEERING COMPANY • DURAND 15, MICH.

▲ For more details circle **NED-593 A** on enclosed inquiry slip ▲

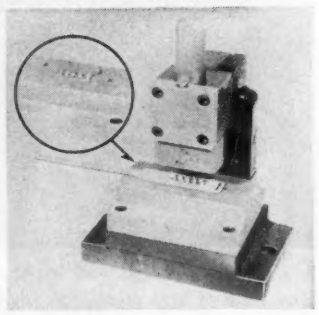
INFRARED HEATERS for difficult-to-heat buildings



Thermostat - controlled, gas-fired infrared heaters effectively heat high ceilinged buildings and large factories and warehouses without ducts or blowers. The Perfection-Schwank heaters radiate infrared rays which heat only the objects they strike. Air is heated by direct contact with these objects. Rays are produced by burning a gas and air mixture on a ceramic element in a reflector. Parabolic reflectors can be mounted at heights to 45 ft and straight-side reflectors from 10 to 20 ft. Units burn natural, LP, mixed, or manufactured gas and have outputs from 12,000 to 48,000 Btu per hour. • **Hupp Corp.**, Perfection Industries Div., 1135 Ivanhoe Rd., Cleveland 10, Ohio.

▲ For more details circle **NED-594 A** on enclosed inquiry slip ▲

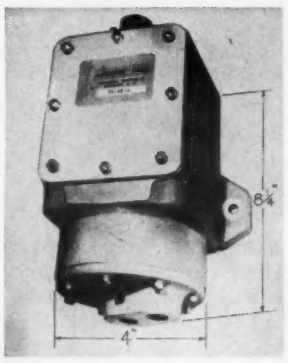
TAG EMBOSSING FIXTURE makes cable, hose, and pipe tags



Interchangeable, male reverse, single line type is used in the Mecco Safety SF-100-B2 cable tag embosser to make ¼ or 3/16-in. characters on aluminum or zinc identification tags. The type holder is replaced for marking nameplates, checks, and other thin parts. A striking anvil which fits into the top of the unit has a replaceable plastic insert that serves as a female die on tags up to 0.012-in. thick. Fixture can be produced with one, two, or more lines of type if the tag size permits. • **M. E. Cunningham Co.**, 1025 Chateau St., Pittsburgh 33, Pa.

▲ For more details circle **NED-595 A** on enclosed inquiry slip ▲

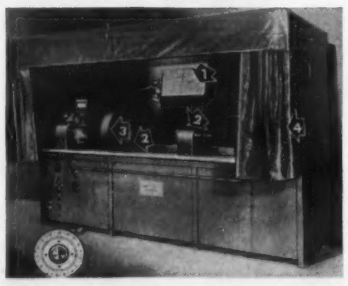
TRANSDUCER accurate in low pressure ranges



Usable in a wide temperature range, the Computran low pressure transducer incorporates a precision Ni-Span-C capsule sensing element. It is highly accurate in the low pressure ranges and has a minimum life of 10 million cycles. The differential transformer provides infinite resolution, with a linear, stepless output signal. Transducer delivers high level output signals up to 1.5 v ac, or up to 100 mv dc with accessory demodulator. Standard ranges are from 0-1.5 to 0-60 psi. Instrument is sealed in a NEMA Class IV housing, permitting use in humid or corrosive environments. • **International Resistance Co.**, Computer Components Div., 401 N. Broad St., Philadelphia 8, Pa.

▲ For more details circle **NED-596 A** on enclosed inquiry slip ▲

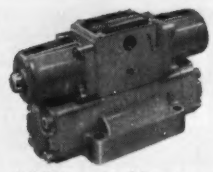
FLAW INSPECTION MACHINES with infinite 100-point control



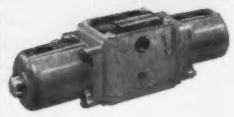
Infinite 100 - point control now offered on Sonoflux 4500 and 6000 high amp direct - current flaw inspection machines permits exact current settings for all sizes and shapes of parts. Standard booth machines are available in 80-in. 4500-amp, 120-in. 6000-amp, and 160-in. 6000-amp sizes. Respective capacities between heads are 59, 99, and 149 in. Keyed features in photo are (1) two-speed exhaust fan, (2) quick cam locks on tailstock and coil, (3) 12-in. ID coil with 15,000 amp-turns power, (4) fast-drawing drapes, and (5) Seal-Less pump. • **Peterson Machine Tool, Inc.**, Sonoflux Div., Merriam, Kans.

▲ For more details circle **NED-597 A** on enclosed inquiry slip ▲

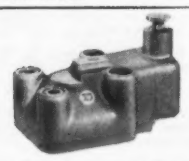
TOP QUALITY VALVES... COMPETITIVELY PRICED



3000 psi, 20 gpm, 4-Way Valves ¾" Pilot Operated, Solenoid Controlled



3000 psi, 6 gpm, 4-Way Valves ⅛" Solenoid Controlled



⅜", ¾" and 1¼" H-P-M Relief Valves

That's right. New, H-P-M 4-way valves offer oil immersed solenoid control; built for 20 to 30 times life expectancy you've known with air gap types. And the price is right. New relief valves give close control of cracking and override pressures; assure long life, free from trouble. Send today for performance chart — actual tests.

H51 HPM

THE HYDRAULIC PRESS MFG. COMPANY
A Division of Koehring Company, Mount Gilead, Ohio, U.S.A.

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H&K perforated materials

a perfect medium of

DESIGN

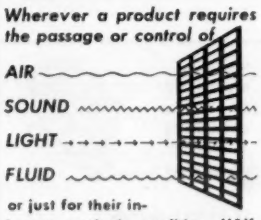
with functional and decorative uses

Harrington & King can perforate the proper design, pattern and open area in practically any metallic or non-metallic material available in coils, sheets or plates—from foil-thin to 1" thick. Specify H&K perforated materials on your next job—see what a difference over 75 years of experience can make!

FIND NEAREST H&K AGENT in the 'Yellow Pages'

Listed Under "Perforated Metals"

Wherever a product requires the passage or control of



or just for their inherent aesthetic qualities, H&K perforated metals can serve you

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We do have one-layer Calsilite insulation for high temperature lines and equipment. Illustrated below is a two-layer application used in special installations.

Modern calcium silicate insulation for use on today's high temperature pipes and vessels. Available in various thicknesses of pipe coverings and blocks. *For more information, see Chemical Engineering Catalog or Sweet's Catalog.*

- Light weight, easy to cut and apply
- Insoluble in water, normal acids and alkalis
- Absorbs moisture without disintegrating
- Constant co-efficient of conductivity

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INDUSTRIAL PRODUCTS DIVISION
500 Fifth Ave., N. Y. 36, N. Y.

PIONEERS IN CALCIUM SILICATE INSULATION

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BI-THERM* DIAL

THERMOMETER

Easy Reading: A quick, reliable temperature indicator, ideal for applications where an easy-reading, low cost, direct connection thermometer is desired. Accurate to ±1% of scale, because it is unaffected by ambient temperatures. Silicone-damped to prevent pointer chatter and improve speed of response. All-welded stainless steel construction with hermetically sealed bezel. Angle stem, 3" or 5" dials; straight stem, 5" only. 4", 6", 9" and 12" stems. Separable wells, ¾" and 1". Range limits minus 40° to plus 750°F. Ask your Taylor Field Engineer, or write for **Bulletin 98267.** Taylor Instrument Companies, Rochester, N.Y., or Toronto, Ontario.

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Taylor Instruments
MEAN ACCURACY FIRST

For more details circle **NED-601 A** on enclosed inquiry slip

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. . . praised by the experts as BEST BUYS IN ELECTRONICS

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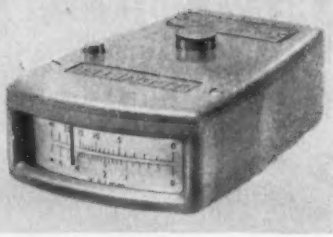
For more details circle **NED-602 A** on enclosed inquiry slip

Measures Nonmagnetic Coatings with ± 5% ± .0001" accuracy

NEW pocket-size THICKNESS GAUGE



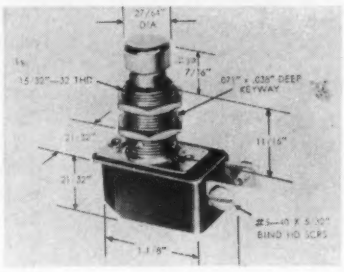
ELCOMETER measures thickness of porcelain enamel, paints, platings, foils, glass, paper, plastics, and other nonmagnetic coatings quickly and accurately. Gauges flat or curved surfaces and hard-to-get-at spots easily. Needle locking device assures correct reading every time. Complete with tough leather case, containing inner pocket for test strips, and carrying harness. Weighs only 6 oz.

FREE TRIAL. Ask your purchasing agent to order an Elcometer on trial basis. Retail price, F.O.B. Cleveland **ONLY $78.75**

FERRO **FERRO CORPORATION**
4151 East 56th Street • Cleveland 5, Ohio

For more details circle **NED-603 A** on enclosed inquiry slip

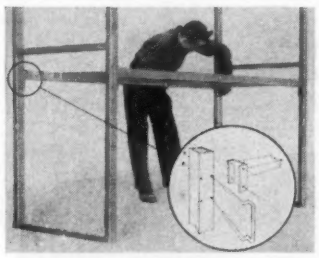
PUSHBUTTON SWITCH
rated 6 amp, 125 v or 3 amp, 250 v



Quick - make quick-break No. 1513 push - on push - off pushbutton switch incorporates an internal armature design and heavy silver contacts for long service life. The single - pole single-throw switch is rated 6 amp on 125 v or 3 amp on 250 v for appliance and electronic apparatus use. • **Sargent Electric Corp.**, Dept. R-1, 630 Merrick Rd., Lynbrook, N. Y.

For more details circle **NED-604 A** on enclosed inquiry slip

STORAGE RACKS
for pallets, dies, drums, bar stock



Easily erected and readily adjustable Super Strength storage racks are made of high carbon rail steel and utilize dual-angle construction and positive locking. They are suited for storage of pallets, skids, dies, drums, bars, or bulk materials. Racks are available in a line of standard sizes, or can be fabricated to specifications. • **Met-Fab, Inc.**, Box 417, Williamsport, Pa.

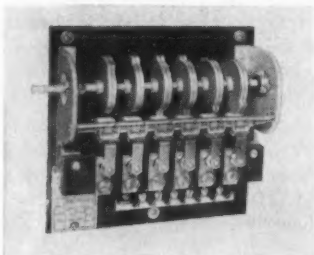
For more details circle **NED-605 A** on enclosed inquiry slip

DISC CAPACITORS
available in 86 values

Packed 100 to the carton and carried in stock, 500 v DCW disc capacitors have industrial uses. The ID Series capacitors are available in 86 values ranging from 3.3 mmf to 0.05 mfd. Depending upon the capacity, diameter varies from ¼ to ⅞ in. All are marked with capacity and tolerances. • **Globe-Union, Inc.**, Centralab Div., 900 E. Keefe Ave., Milwaukee 1, Wis.

For more details circle **NED-606 A** on enclosed inquiry slip

ROTARY LIMIT SWITCHES
have from 2 to 16 circuits



Built to operate for millions of operations at speeds up to 300 rpm with no appreciable wear, these rotary cam limit switches feature heavy duty construction. Ball bearing cam shaft, nylon roller followers, ⅜-in. 15-amp coil silver nonflexible contacts, and accurate 2-in. diameter nickel plated cams contribute to long life. Units with 2 to 16 circuits have a ¼-in. cam shaft for connection to drive. • **Eagle Signal Co.**, 202 20th St., Moline, Ill.

For more details circle **NED-607 A** on enclosed inquiry slip

AIR-COOLED HYDROGEN LAMP
for spectrophotometric devices

Developed for use in the Bausch & Lomb hydrogen arc illuminator, the HAK-50 air-cooled hydrogen arc lamp can be adapted for use in other spectrophotometric instruments. The device is used in the study of fluorescence, phosphorescence, and ultraviolet reflectance of materials. The illuminator, powered by an ac-dc converter, supplies a steady, intense source of continuous ultraviolet illumination. Lamp is listed at $100. • **Sylvania Electric Products Inc.**, 730 Third Ave., New York 17, N. Y.

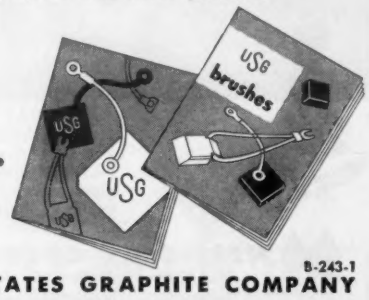
For more details circle **NED-608 A** on enclosed inquiry slip

USG®

BRUSHES

The solution to many major or minor brush problems can be solved with United States Graphite Company's USG Brushes. The shunt connections are permanent. Sizes are accurate for each application from fractional horsepower to locomotive diesel generator. Grades include carbon, carbon-graphite, electrographilitic, graphite, metal-graphite and silver graphite.

There is helpful, useful data in the complete but CONCISE USG Brush catalog B-56 and the USG grade list. Write for your copies today.



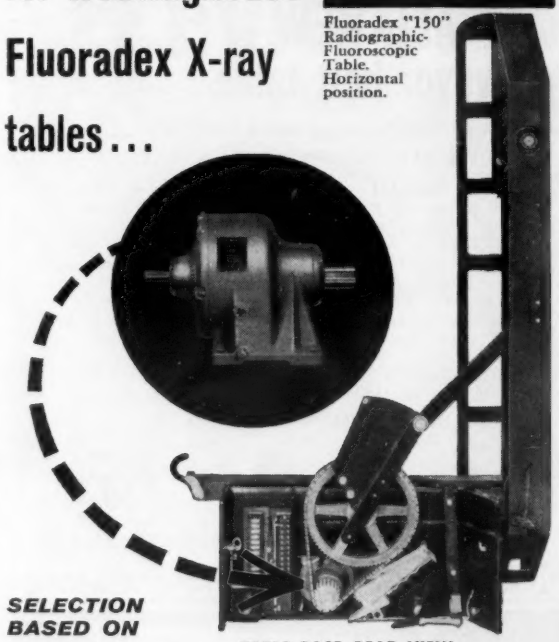
B-243-1

THE UNITED STATES GRAPHITE COMPANY
DIVISION OF THE WICKES CORPORATION • SAGINAW 10, MICHIGAN

For more details circle **NED-609 A** on enclosed inquiry slip

Winsmith speed reducers specified for Westinghouse Fluoradex X-ray tables...

Fluoradex "150" Radiographic-Fluoroscopic Table. Horizontal position.



SELECTION BASED ON
- **Compactness**
- **Efficiency**
- **Quiet Operation**

TABLE BASE, REAR VIEW
Table is tilted by precision linkage mounted on a multiple sprocket, chain-driven through a compact Winsmith Differential Reducer.

Fluoradex Radiographic-Fluoroscopic Tables are precision instruments of high strength and flexibility, combined with safe, quiet operation. For table tilt motion in keeping with this high-quality design, Westinghouse specified a Winsmith Differential Reducer with 108:1 reduction. Reasons for the Westinghouse choice of Winsmith — compact design, efficiency and quiet operation — are the same reasons so many other leading manufacturers also specify "Winsmith" . . . the most complete line of speed reducers from a single source of supply.

WRITE TODAY for Catalog No. 155 for full details on selection, operation and maintenance of the hundreds of Winsmith types and sizes for every drive application.

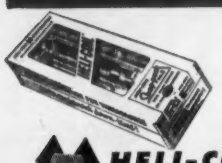
WINSMITH SPEED REDUCERS

WINSMITH, INC.
119 Eaton Street, Springville, (Erie County), N. Y.

For more details circle **NED-610 A** on enclosed inquiry slip

How to restore damaged threads to size better than new . . . in minutes with HELI-COIL® Screw Thread Inserts

Save expensive parts, downtime, costs. Get the effective and economical *Heli-Coil* SHOP-PACK Thread Repair Kit. In just *minutes* you can install new stainless steel threads that permanently resist wear, corrosion, galling, seizing and stripping in *any* material. Permits you to use original size screw.



SHOP-PACK Thread Repair Kits are available in all standard thread series and sizes including pipe threads and MM sizes for spark plug holes, from your industrial distributor, or write us today for free literature.

HELI-COIL CORPORATION
3401 Shelter Rock Lane, Danbury, Connecticut
In Canada: Armstrong Beverley Engineering Ltd., 6975 Jeanne Nanse St., Montreal 15, Que.

▲ For more details circle NED-611 A on enclosed inquiry slip ▲

You can really cut costs with Standard's

ALL-NEW conveyor belt table

with a wide range of assembly-sorting-processing applications

This new Standard belt table provides more speed, more efficiency on all assembly, sorting or processing operations. Flat top extends all the way across the conveyor frame, and is adjustable sideways for quickly adapting unit to changes in production procedure. Nine standard belt widths — from 6" to 24". Six table widths — from 18" to 48". Heights adjustable from 16" to 79".

Powered by reliable Handidrive unit: constant or variable speed from 5 to 120 fpm. Length of belt table up to 75 feet.

Write Dept. K-1, STANDARD CONVEYOR COMPANY, General Offices, North St. Paul 9, Minnesota.

Sales and service in principal cities

Standard GRAVITY & POWER CONVEYORS

OVER 50 years of conveyor experience

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4 Ways Better For Every Sweeping Job!

1. Highest quality materials and construction
2. Outlast ordinary brushes 2 to 1
3. Tufts cannot come out or come loose
4. 27 styles and sizes to choose from

Milwaukee Dustless Brush Co., 530 N. 22nd St., Milwaukee, Wis.

FIRM _____
ADDRESS _____
CITY _____ STATE _____

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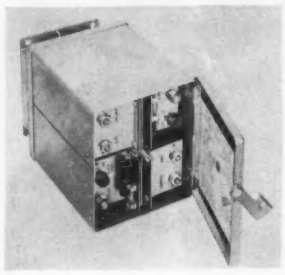
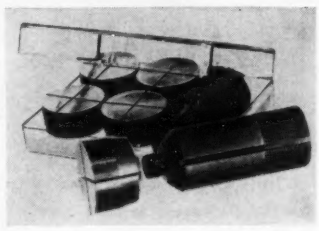
SELF-POWERED ALARM operated by internal, remote signal



Model R2A self-powered electronic alarm can actuate an annunciator or perform an auxiliary control function when a process signal reaches a preset point. It can be installed with the alarm point set from a remote location. The null balance device is used for one or two-point alarms, operating independently of the instrument circuit or in parallel with any AutroniC indicator-recorder-controller combinations. Basic components for a single alarm point are mounted on two printed circuit cards for high and low limit alarms. Unit operates from a 0 to 0.5 v ac signal. • **Swartwout Co.,** 18511 Euclid Ave., Cleveland 12, Ohio.

▲ For more details circle NED-614 A on enclosed inquiry slip ▲

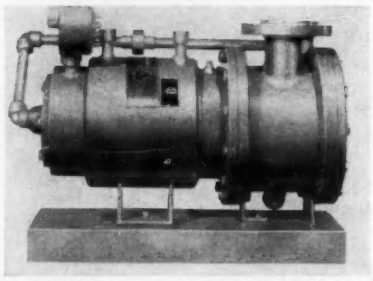
DETACHABLE COLLET CHUCKS for difficult to hold parts



Hard-to-hold parts, hex or square stock, castings, forgings, or any shape that can be bored or milled are held securely by line of O & L detachable, reusable collet chucks. They will hold on shoulders as small as 0.015 in. to concentricity of 0.0005 in. Set 1 with 1/8 to 1 3/8 in. capacity is shown and comes with four collets and one shank. Sets 2 and 3 with 1/4 to 2 1/4 and 2 to 4 1/4 in. capacities, respectively, are furnished with aluminum collet, steel closing head, spindle guide, and shank. • **Hornet Machine Products, Inc.,** 125 Penn St., El Segundo, Calif.

▲ For more details circle NED-615 A on enclosed inquiry slip ▲

TWO-STAGE PUMPS canned units for heads to 600 ft

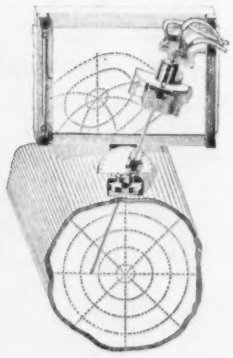


Rotor, shaft, and impellers of Series D two-stage, high head pumps form a single rotating assembly. Both rotor and stator are enclosed or "canned" within corrosion resistant, nonmagnetic alloy cylinders. The pumped fluid circulates through the motor section to cool the motor and lubricate the bearings. Designed for leakproof pumping at heads up to 600 ft, the pumps require no external lubrication. Those operating under 400° F have water jackets around the stator for cooling, if required. Models for a maximum of 850° F have external heat exchangers. Maximum pressure is 3500 psi. Pumps can be modified for vacuum or slurry service. • **Fostoria Corp.,** Chempump Div., Box 35-1, Huntingdon Valley, Pa.

▲ For more details circle NED-616 A on enclosed inquiry slip ▲

FLUID FLOW METERS check fluid stream cross section

Detailed velocity, pressure, direction, and temperature measurements can be obtained at any point on a given cross section of a flow duct or other piece of fluid flow machinery with these measuring devices. The manually operated and remote controlled area traverse units utilize different types of primary probes for measuring total pressure alone, or total pressure, static pressure, pitch angle, yaw angle, and total temperature. Direct measurements of turbine, blower, and compressor efficiency can be made. Manual type illustrated has a plotting board mounted perpendicular to the flow direction and parallel to the cross section to be measured on which measurements are recorded. • **United Sensor & Control Corp.,** Box 127, Glastonbury, Conn.



▲ For more details circle NED-617 A on enclosed inquiry slip ▲

up to 60% shorter than standard motors

NEW Louis Allis Pancake Motor

The new Louis Allis Pancake Motor is up to 60% shorter than other motors of its type. Actually, it's a conventionally-built—and consequently trouble-free—radial air-gap motor that's been compressed to less than half the length of many flange-mounted motors. The Pancake Motor couples space-saving design with top quality . . . maintains NEMA service factor.

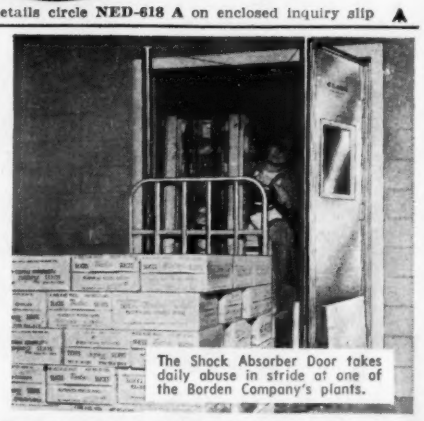
The Pancake is ideal for machine tools, roof ventilators — any application where space is critical. Features include a rigid cast iron frame, pre-lubricated oversize bearings, and an insulating varnish that provides the highest degree of moisture, acid, and alkali resistance. Sizes from 1 to 15 hp, open or enclosed. Write The Louis Allis Company, 436 East Stewart Street, Milwaukee 1, Wisconsin.

SM-103

LOUIS ALLIS

▲ For more details circle NED-618 A on enclosed inquiry slip ▲

Shrugs Off Shocks That *wreck* Ordinary Doors!



The Shock Absorber Door takes daily abuse in stride at one of the Borden Company's plants.

CLARK SHOCK ABSORBER DOOR

Proven in rigorous tests; proven in the plant. If you move materials, you need the Shock Absorber Door. Here's why:

- The Bumper takes the Shock—not the Door. Exclusive Urethane-Foamed Bumpers absorb impact.
- Won't come off the fastenings. Flexibly suspended hinges distribute stress evenly.
- Retains temperature Controls. Neoprene Sealing keeps out unwanted cold or hot air.
- Won't rip or warp. Lightweight, rigid door rides with the blow. Designed to take hundreds of thousands of openings with no "time outs" for repair.
- Shatter-proof Plexiglas windows let you know what's on the other side.

Low cost; complete in one unit. Installs in minutes! Write for full information. Specify size of opening.

CLARK DOOR COMPANY, INC. *(since 1878)* 511 Hunterdon St. Newark 8, N. J.

See us at Booth #127, Plant Maintenance Show

▲ For more details circle NED-619 A on enclosed inquiry slip ▲

The Weston '4000 Series'

NEW HEAVY-DUTY BI-METAL THERMOMETERS

give you—

- All-stainless-steel construction
- Accuracy within ±1% of range
- In-line scales . . . eliminate parallax errors
- Standard external adjustment feature
- Exclusive gasket material . . . seals out moisture
- Easy window replacement on-the-job
- Full line of sizes, stem lengths, ranges

FOR NEW LITERATURE giving complete details and name of local distributor, contact your nearby Weston representative . . . or write to Daystrom-Weston Sales Division, Newark 12, N. J. *In Canada: Daystrom Ltd., 840 Caledonia Rd., Toronto 19, Ont. Export: Daystrom Int'l., 100 Empire St., Newark 12, N. J.*

WESTON A DAYSTROM UNIT

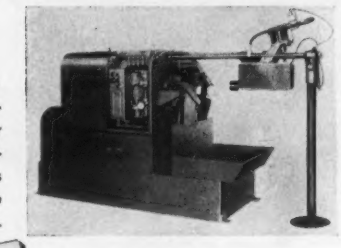
Bi-metal Thermometers

WORLD LEADER IN MEASUREMENT AND CONTROL

▲ For more details circle NED-620 A on enclosed inquiry slip ▲

FASTER AUTOMATIC CUT-OFF Tubing, Pipe and Bar Stock

the Modern Way



Automatic operation—from loading to final cut-off. Handles solid bar stock up to 3" O.D.—tubing up to 8" O.D. Cuts any material that can be turned. 16 spindle speeds.

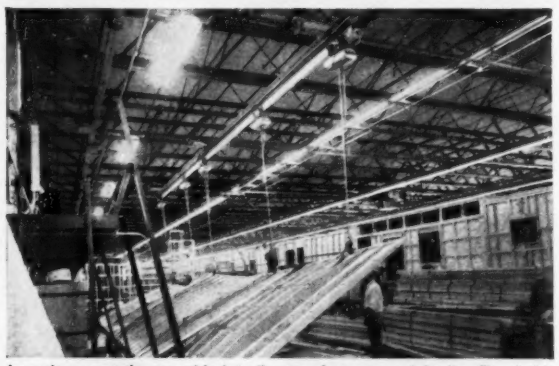
CATALOG

Has complete specifications of all models. Illustrates parts that are being formed, grooved, flanged or chamfered and cut off in a single operation at a high rate of speed. Also describes the automatic feeder, hot spinning machine for sealing ends of tubing, and the Modern Safety Drill Table.

108 **WRITE**

MODERN MACHINE TOOL CO.
2005 Losey, Jackson, Michigan

For more details circle NED-621 A on enclosed inquiry slip



Lowering a partly assembled trailer top from an upright jig. Five hoists are used because some tops are made in 3 sections. This is a 44-ft. Monorail crane. A 30-ft. crane and 150 ft. of Monorail track also speed production.

AMERICAN MONORAIL DOES IT!

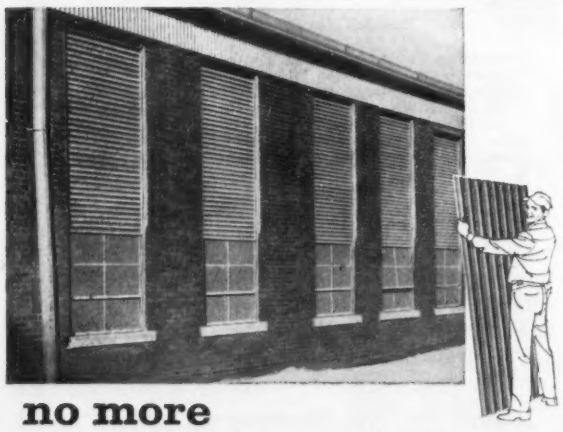
20% Boost in Production
20% Saving in Labor

"Our Monorail system eliminated 16 hard laboring jobs—4 in each of 4 departments. Our production has increased at least 20%, thanks to Monorail and we have virtually eliminated backsprains and accidents."

(Statement made by an executive of Richardson Homes Corporation, mobile home builder at Elkhart, Indiana.)

AMERICAN MONORAIL 1116 E. 200th STREET CLEVELAND 17, OHIO

For more details circle NED-622 A on enclosed inquiry slip



no more broken windows

Rockwell has glazed with Structoglas

Rockwell plans to cut maintenance costs with new Structoglas glazing in their Barberton, Ohio foundry.

Structoglas is *shatterproof reinforced plastic*—withstands shock, impact—eliminates glass breakage. Tinted to filter out glare without painting; easily installed with ordinary methods. Get details on *reducing maintenance costs* in your plant with Structoglas glazing. Write for Firestone and Rockwell Case Histories and Glazing Folder.

9808

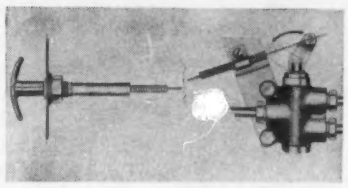
Get the valuable facts about Structoglas . . . today!

structoglas®

STRUCTOGLAS DIVISION
International Molded Plastics, Inc., Dept. 106 Cleveland 9, Ohio

For more details circle NED-623 A on enclosed inquiry slip

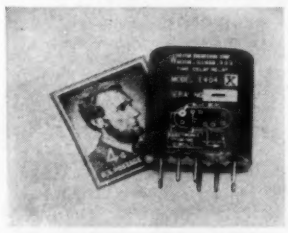
REMOTE CONTROL VALVE
acts as distributor, selector unit



Easy changing of feed from one fuel tank to another and altering the flow direction of various liquids from distant control points are applications for this low cost remote control valve. Serving as a distributor or selector valve, it prevents draining or pumping from one tank to another, or sucking air from an empty tank. Valve is suited for systems developing from 20 in. Hg vacuum to 15 psi. Several sizes with a number of connector end styles are offered. • **Anderson Brass Co.**, 102 S. Campbell Ave., Detroit, Mich.

For more details circle NED-624 A on enclosed inquiry slip

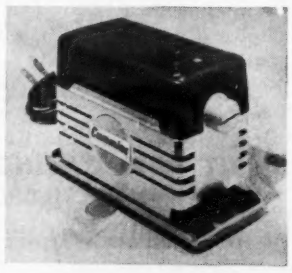
TIME DELAY RELAY
weighs only 1/2 oz



Potted in polyurethane foam containing CO_2, the hermetically sealed E404 time delay relay can be mounted in any position. It is built to withstand high vibration, shock, and acceleration and has a dielectric strength of 100 v rms at 60 cps. Operating temperature range is −65 to 85° C and voltage range is 18 to 32 v dc. Relay has a maximum reset time of 10 microseconds and delay ranges from 0.1 to 10 sec. Longer time delays can be specified. • **Wheaton Engineering Corp.**, 920 Manchester Rd., Wheaton, Ill.

For more details circle NED-625 A on enclosed inquiry slip

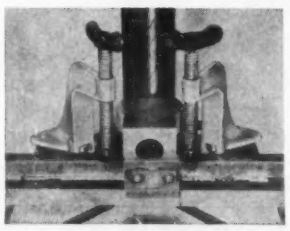
FINISHING SANDER
delivers 14,400 strokes per minute



This 3¼-lb No. 454 electric sander will put a high gloss finish on soft or hard woods, plastics, and other materials. Double magnetic motor delivers 14,400 sanding strokes per minute. The 13 sq in. neoprene sanding pad has spring loaded clamps for rapid changing of abrasive sheets. • **John Oster Mfg. Co.**, Cummins Portable Tool Div., 5055 N. Lydell Ave., Milwaukee 17, Wis.

For more details circle NED-626 A on enclosed inquiry slip

MULTIPURPOSE CLAMP
attaches to wood or metal surface



Work is held firmly on any surface, without being limited to positions near the edge, by this addition to the Jorgensen clamp line. It attaches to any wood or metal work surface by means of a bolt spotted in the middle or along the edge of the work area. Holding bolt also fits into T-slots of machine tool tables. It is suited for metal and woodworking mitering, gluing, routing, sanding, mortising, and other jobs. • **Adjustable Clamp Co.**, Dept. HC-34, 417 N. Ashland Ave., Chicago 22, Ill.

For more details circle NED-627 A on enclosed inquiry slip

FUEL FILTER
for LP-gas engine conversions

Made from hex brass bar stock, Model F-101 Beam Filter with sintered bronze filter element is suitable for most small engine conversions in fork lift trucks, tractors, and small stationary engines. While designed primarily for LP-gas, unit works equally well for gasoline and other hydrocarbon fuels. It has ¼-in. fuel connection. Male outlet allows direct attachment to solenoid valve or regulator. Filter is cleaned by reverse blowing. Unit lists for $2.25. • **Beam Products Mfg. Co.**, 3040 Rosslyn St., Los Angeles 65, Calif.

For more details circle NED-628 A on enclosed inquiry slip

Shift Problem Solved *with* **FUNK revers-O-matic®**

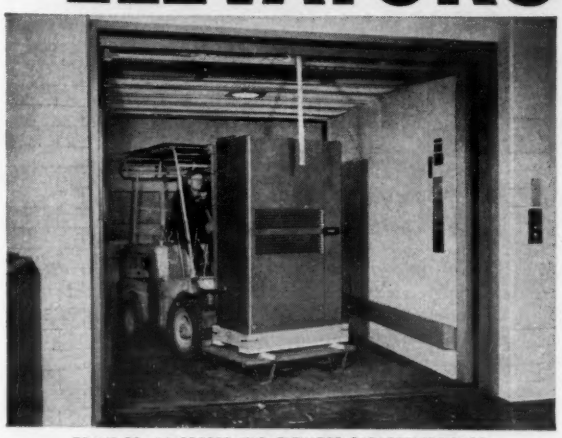
On this Browning Road Roller, a FUNK Revers-O-Matic allows the operator to change both speed and direction—*with just one lever.* Shifting is smooth and instant, with no wheel spinning.

Look for FUNK Revers-O-Matic Drive and other FUNK components on the equipment you buy.

FUNK MFG. CO. Box 577-C Coffeyville, Kansas

For more details circle NED-629 A on enclosed inquiry slip

SAVE ON FREIGHT ELEVATORS



TRANE CO., LA CROSSE, WIS. ELEVATOR CAPACITY 12,000 LBS.

Rotary Oildraulic Operation handles capacities to 100,000 lbs. economically

For the shocks and jolts of heavy-duty service, there's no more dependable and economical elevator than the Rotary Oildraulic. It's pushed up and supported from below by a powerful hydraulic plunger that won't "give" with sudden heavy loads. Big elevator problems are solved by Rotary Lift Co. for all of American industry.

- No expensive overhead machinery penthouse
- No cables to inspect and replace periodically
- Lighter shaftway construction
- All adjustments easily made on one control unit
- Consistently smooth, dependable performance
- Easily installed in new or old buildings
- Parts and service available everywhere

Rotary Oildraulic® Elevators

ROTARY LIFT COMPANY
Division of Dover Corporation
Memphis, Tenn. — Chatham, Ontario

Rotary®

MAIL NOW FOR COMPLETE DATA

Rotary Lift Co.
1120 Kentucky,
Memphis 2, Tenn.

Send complete information on ( ) freight, ( ) passenger elevators to:

Name_____

Company_____

Address_____

For more details circle NED-630 A on enclosed inquiry slip

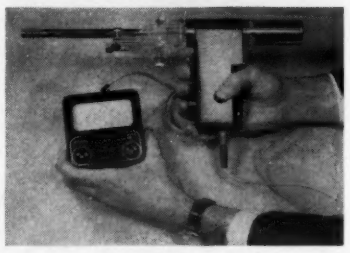
▲ For more details circle NED-632 A on enclosed inquiry slip ▲

5¾-HP TRACTOR performs many maintenance jobs

Powered by a heavy duty 5¾-hp Briggs & Stratton engine, the Mark I tractor has sufficient power to pull a 32,000-lb load in tests. It incorporates oil bath air cleaner, and oversized muffler, and recoil starting mechanism, with battery key starting optional. Transmission with shift lever has maximum forward speeds of 1, 4, and 6 mph, plus neutral and reverse. Single pedal acts as a brake and clutch. The 63-in. long, 32-in. wide tractor weighs 335 lb. A 32-in. rotary mower, 42-in. snow plow-bulldozer blade, three-unit gang mower, two-wheel dump cart with 32 x 48-in. body, and 1000-lb capacity cart with 26 x 40-in. body are among attachments offered. • **Porter-Cable Machine Co.**, 115 Seneca St., Syracuse 4, N. Y.

▲ For more details circle NED-635 A on enclosed inquiry slip ▲

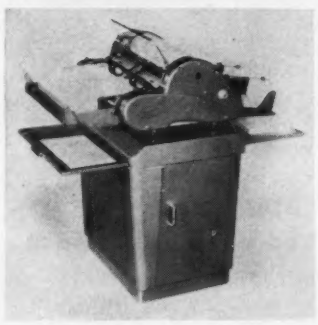
HUMIDITY METER determines air moisture content



Moisture content of air in rooms, in changing air currents, and in closed spaces such as drying ovens and piping is measured in seconds by the A+Hygrophil portable thermistor psychrometer. The pistol-like battery-operated, rapid-response instrument has three scales covering from 10 to 176° F. Accuracy is within 0.5 per cent of relative humidity and readability, within ¼° F. Unit can be fitted with a spring coil motor for operation in explosive atmospheres. It sells for $280 with barrel extension and extra wicks. • **Atkins Technical, Inc.**, 1276 W. Third St., Cleveland 13, Ohio.

▲ For more details circle NED-636 A on enclosed inquiry slip ▲

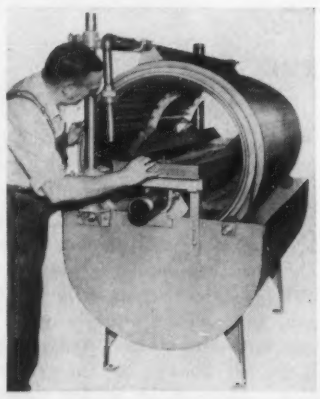
SPIRIT DUPLICATING MACHINE dual-feeds 10,000 copies per hour



Copease-Banda Model 170 dual ream feed spirit duplicating machine simultaneously feeds, duplicates, and stacks side-by-side two full reams of 8½ x 11-in. paper. Production rate is 10,000 copies per hour in a dual feeding operation, or one full ream of 14 x 17-in. paper at a 5000-per hour rate. Machine is adaptable to any size paper from 3 x 5 in. to 14 x 17 in. Preset counter automatically shuts off the machine when the desired number of copies are completed. Up to seven colors can be duplicated simultaneously. Fluid feeds from a 1-gal container in the cabinet base. • **Copease Corp.**, Duplicating Div., 425 Park Ave., New York 22, N. Y.

▲ For more details circle NED-637 A on enclosed inquiry slip ▲

SELF-CLEANING STRAINER for chemicals and solvents



Stainless steel, bronze castings, and red brass piping, or stainless steel alone are used in the construction of this self-cleaning strainer for chemicals and solvents. Liquid is passed through a fine rotating wire cloth screen to remove foreign matter. The screen is automatically cleaned by shower nozzles, with waste deposited in a tray for draining off into the sewer system. Two sizes have 40 and 100-gpm capacities. • **Sinclair Co.**, 60 Appleton St., Holyoke, Mass.

▲ For more details circle NED-638 A on enclosed inquiry slip ▲

HERE'S PROOF OF PERFORMANCE

"We like everything about our Clausing lathe. The spindle capacity 'beef' of the machine, and ease of operation are impressive. The finish we get is phenomenal. And, you just can't beat Clausing-Colchester geared-head lathes for outstanding value!"

THE JARO MACHINE & TOOL COMPANY

Clausing geared-head lathes are bigger in capacity than other lathes in their class. Larger spindles, larger thru-hole, larger bearings for heavier work. 17" lathe spindle, for example, has 3⅛" thru-hole. Have heavy-duty construction throughout with bed ways induction hardened. Gears in head and quick-change box run in bath of oil. Built for precision performance — to American standards of toolroom lathe accuracy. Have Gamet Micron tapered roller bearings with oil flow lubrication. Each is an outstanding value. 13" cabinet base models, for example, including motor and controls, start at $2302. Investigate before investing in *any* lathe.

Write for FREE LITERATURE

CLAUSING **CLAUSING DIVISION**
ATLAS PRESS COMPANY
1-113 N. PITCHER ST., Kalamazoo, Mich.

▲ For more details circle NED-639 A on enclosed inquiry slip ▲

HOW TO ENGINEER SPECIFY ORDER PRICE...

AIR POWER CYLINDERS

Here is complete engineering data on Hannifin's newest line of air power cylinders. Every mounting style is fully dimensioned in all sizes. Standard models or special modifications are made easy to specify. The price sheet, too, is easy to understand, easy to use.

Write for Bulletin 213-B.

HANNIFIN

Hannifin Company, 527 South Wolf Road, Des Plaines, Ill.
(Hannifin Company is a division of Parker-Hannifin Corporation)

▲ For more details circle NED-633 A on enclosed inquiry slip ▲

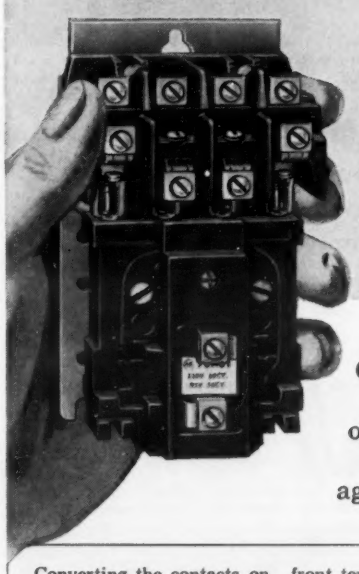
ARE SEWER-CLEANING COSTS A STEADY DRAIN ON YOUR BUDGET?

More and more plants now find it profitable to own their own SPARTAN Drain and Sewer Cleaning equipment. Savings pay for the equipment quickly, and it's always immediately available — no delays. SPARTAN moves to the job in seconds, can do the job in minutes. Any employee can operate a SPARTAN efficiently and safely, without special skills or training. Write today for the complete SPARTAN catalog showing sizes to fit your plant requirements.

SPARTAN TOOL DIVISION
H. D. Conkey & Company, Mendota, Illinois
AFFILIATES { CONCO BUILDING PRODUCTS, INC. - Brick, Tile, Stone; CONCO MATERIALS HANDLING DIVISION - Cranes, Hoists; FIELD CONTROL DIVISION - Barometric Draft Controls

▲ For more details circle NED-634 A on enclosed inquiry slip ▲

NEW
Convertible Contact
CONTROL RELAY



Change contacts from normally open to normally closed (or back again) in seconds!

Converting the contacts on the new Type BR relays is handled in three easy steps —using only a screwdriver. To change from normally open contacts to normally closed, simply remove lower front terminal; rotate movable contact, and then replace front terminal, but in the inverted position. That's all there is to it. Reverse the above process to change contacts back to N.O.

The unusual flexibility of these new A-B convertible contact relays makes them ideal for control systems that may be altered or rewired from time to time. And with the Type BR providing either N.O. or N.C. contacts, relay inventories are slashed. These rugged relays are good for millions of trouble free operations, and their double break, silver contacts never need servicing.

Bulletin 700 Type BR relays are made with from two to six poles. The seven or eight pole construction adds either one or two poles to the base. This can easily be done in the field. All poles are convertible from N.O. to N.C. Write for full details.

Allen-Bradley Co., 1334 S. Second St., Milwaukee 4, Wis.
In Canada: Allen-Bradley Canada Ltd., Galt, Ont.

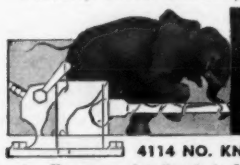
ALLEN-BRADLEY
Member of NEMA
Quality Motor Control

▲ For more details circle NED-640 A on enclosed inquiry slip ▲

Cut Costs with MEAD MIDGET AIR CLAMPS

Horizontal and Vertical!

Both models deliver 80 lbs. pressure on a line pressure of 100 lbs. They'll save countless man-hours in assembly operations involving welding, riveting, bolting, etc. *Advantages over mechanical clamps;* 1. Any number can be operated by single master valve. 2. Easily installed in cramped corners. 3. Equal ram pressure at any stroke point. Send for new Mead AIR POWER Catalog describing our line of Air Clamps, Air Vises, Air Presses, Work Feeders, Valve Controls, etc. **Pneumatic Cylinders*



MEAD SPECIALTIES COMPANY

4114 NO. KNOX AVE., DEPT. NA-10, CHICAGO 41, ILL.

▲ For more details circle **NED-641 A** on enclosed inquiry slip ▲

DRILLUNIT *Solves* Drilling Problems

Flexible-Dependable

Self contained —Compact,—can be mounted in any position or angle, in a small area.

Single or Multiple spindle applications, can be adapted for Drilling, Reaming, Chamfering, Boring, Counter Boring and Spot Facing.

Stroke and feed variations obtainable without changes in the unit.—Step feed drilling possible with slight modification.

9" and 12" stroke —up to 5 H.P.

Standard Models Available from Stock

Write for literature.

DRILLUNIT, INC.

HYDRAULIC DRILL UNITS

3267 Wight Street • Detroit 7, Michigan

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RUSH IS NO PROBLEM

ORDER SPRAY NOZZLES FROM SPRAYING SYSTEMS

• An important part of our service to customers is our "immediate" delivery department. Whatever brand of nozzle you may be using, you can replace with Spraying Systems . . . and obtain equal or better spray characteristics and improve your operation. We maintain a complete stock of all standard types and capacities . . . average inventory over 12,000 nozzle TYPES ...for shipment of rush orders on same day received.

WRITE FOR CATALOG 24 . . . forty-eight pages of complete data on thousands of nozzle types and capacities.

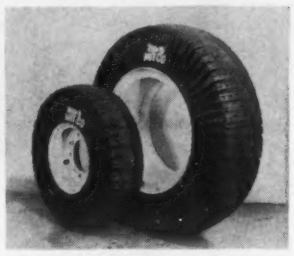
SPRAYING SYSTEMS CO.

3211 RANDOLPH STREET • BELLWOOD, ILLINOIS

ADVANCED SPRAY NOZZLE DESIGN FOR NEW DIMENSIONS IN CONTROL AND PERFORMANCE

▲ For more details circle **NED-643 A** on enclosed inquiry slip ▲

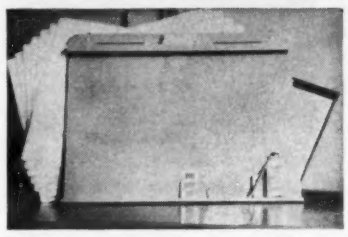
INDUSTRIAL TRUCK TIRES
varied sizes carry up to 10,000 lb



Rubber pads are compressed under 200,000 psi on a prebent steel band which is then bolted and welded in the making of Mitco laminated industrial truck tires. Special heavy duty tires have the same tight construction, except that the laminations are held by a leaf chain instead of a steel band. Tires of this type are offered in special sizes as large as 12.00 x 24 with a 10 to 15-mph load capacity of 10,000 lb. Stock sizes range from 4.00 x 6 to 9.00 x 28 mounted on split wheel or flat base rim. Use is on yard trucks, cranes, and crawlers in operations where an extremely tough, durable tire is required. • **Mitchell Industrial Tire Co.**, Box 468, Chattanooga, Tenn.

▲ For more details circle **NED-644 A** on enclosed inquiry slip ▲

WORK CONTROL BOARD
has erasable writing surface



Now offered with a steel card holder case or backboard and a gray baked enamel finish, the Sked - U - Cal work control board serves as a 25-year wall calendar unit for visual work and program scheduling. It is offered with a set of plasticized calendar cards, a 25-year set of month-guide cards, china marking pencils, bottle of Kleen-aid plastic cleaner, Plan-A-Cal 20-year date and time planning device, Add-A-Space memo cards, press-on colored vinyl signal stickers, and metal hangers. Writing on the board is easily erased. Price of complete unit is $35. • **L. D. Blehart Co.**, 10 Fiske Place, Mt. Vernon, N. Y.

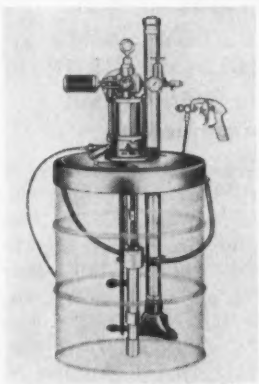
▲ For more details circle **NED-645 A** on enclosed inquiry slip ▲

DIFFERENTIAL PRESSURE GAGE
detects difference of 0.0001 in. H_2O

Sensing device in series of electrical differential pressure indicators is a noble metal thermopile installed in a flow tube. Most sensitive instrument has full scale range from zero to 0.01 in. H_2O and detects differences as small as 0.0001 in. H_2O. Other models have ranges from zero to 0.03, 0.1, 1.0, 3, 10, 20, 50, and 100 in. H_2O. Flow tubes can be installed directly in line for use as draft gage, or to control differential pressure in industrial heating systems. They can also measure differential across an orifice in an air or gas line for use as a flowmeter. Instrument is priced at $250. • **Hastings-Raydist, Inc.**, Dept. 10, 1500 Newcomb Ave., Hampton, Va.

▲ For more details circle **NED-646 A** on enclosed inquiry slip ▲

PAINT SPRAYING SYSTEM
airless type uses most finishes



Atomization of primers, enamels, and most lacquers is accomplished by the Hydrastat spray painting system solely through extremely high pressure at which the paint is delivered to the spray tip. Finely atomized particles fly to the target in a well-defined pattern without overspray. System can be used indoors or outdoors. Portable Model 7827A is mounted on a three-wheel dolly and accommodates either 5 or 10-gal original containers. It has a power hoist for drum changes, a built-in agitator, and serves two or more spray guns. Similar Model 7827J without cart and power hoist sprays directly from 54-gal drums. Forty-five different spray tips are offered. • **Stewart-Warner Corp.**, Alemite Div., 1826 Diversey Parkway, Chicago 14, Ill.

▲ For more details circle **NED-647 A** on enclosed inquiry slip ▲

Give your product a lift with a

WHIZ-LIFTER

MATERIALS ELEVATING MACHINE—Assures speedy, automatic bulk product elevating into hopper of a weighing or filling machine without danger of spillage or breakage! Will handle drugs, hardware, pharmaceuticals, plastics, chemicals, etc., with trouble-free efficiency.

Write for literature

FRAZIER & SON

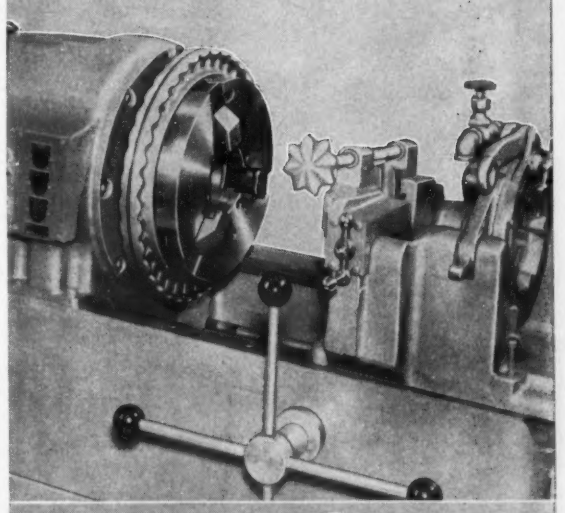
20-01 INDUSTRIAL WEST, ALLWOOD, CLIFTON, NEW JERSEY

Designers and manufacturers of • Volumetric and Net Weighing Machines • Parts Handling Equipment • Rotary Filling Machines • Conveying & Elevating Equipment

▲ For more details circle **NED-648 A** on enclosed inquiry slip ▲

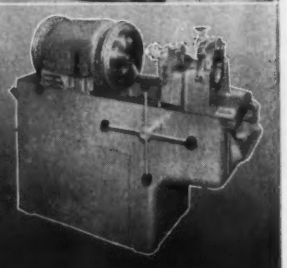
THREADS 1 TO 4-INCH PIPE WITH... NO DIE CHANGE!

BEAVER SPEED KING



Only BEAVER HAS IT!

Only 980 lbs.!



BEAVER

Send for complete catalog and name of nearest distributor

PIPE TOOLS, INC.

DANA AVE.
WARREN, OHIO

▲ For more details circle **NED-649 A** on enclosed inquiry slip ▲

LOW-COST AUTOMATION

with the

Bellows AIR MOTOR®

Automation need not be expensive! With the Bellows Air Motor — the *original* air cylinder with built-in valve and operating controls — your own men can automate existing machinery or build special-purpose high-production equipment that boosts production per man-hour, improves quality, reduces scrap, prolongs tool life. Bellows Air Motors provide all the motions necessary to control or operate machinery — push-pull, lift-lower, twist-turn — *quickly, economically, dependably.*

Write for free Bulletins BM-25 and ML-5
Address Dept. NED-160,
The Bellows Co., Akron 9, Ohio

639-C

The Bellows Co.
DIVISION OF INTERNATIONAL BASIC ECONOMY CORPORATION (IBEC)
AKRON 9, OHIO

OTHER INDUSTRIAL DIVISIONS OF IBEC: Sinclair-Collins Valve Co., Valvair, Akron, Ohio; V. D. Anderson Co., Cleveland, Ohio.

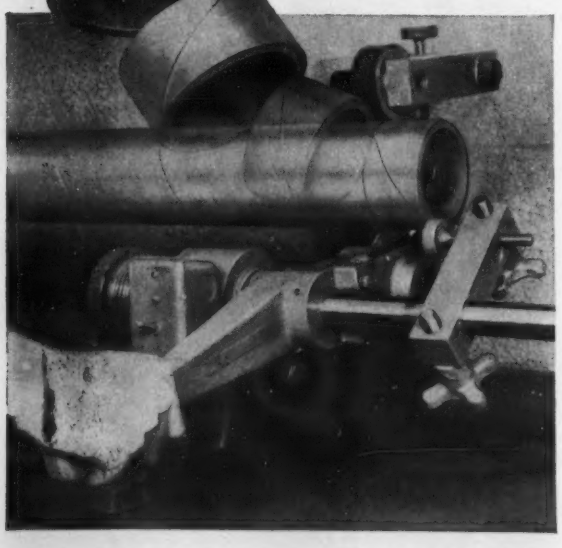
▲ For more details circle NED-650 A on enclosed inquiry slip ▲

AT LAST—A PRACTICAL NEW

CORE CUTTER

CAMERON MODEL TC-1M

CLEAN-CUT EDGES
UNIFORM, PREDETERMINED LENGTHS
EASY RIGHT-HAND, DOWN-PRESSURE CONTROL
FULL VIEW OF THE CUT PREVENTS SCORING OF MANDREL, ADDS LIFE TO CUTTER WHEEL



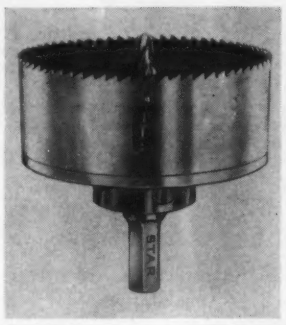
Designed by Cameron Specialists for uniformly accurate, clean-cut paper cores. Cuts to center of 104" core, with cut lengths up to a maximum of 52". Handles tubes from 2½" to 6" inside diameter. Compact design requires little space on bench; frame available for floor mounting. Request information on equipment for larger core sizes. Write for free literature. AA-369

CAMERON

Cameron Machine Company, Franklin Road, Dover, N. J.
Canada: Cameron Machine Co. of Canada, Ltd., 15 Hatt St., Dundas, Ontario
France: Batignolles-Chatillon, 5 Rue De Monttessuy, Paris (7e) France

▲ For more details circle NED-651 A on enclosed inquiry slip ▲

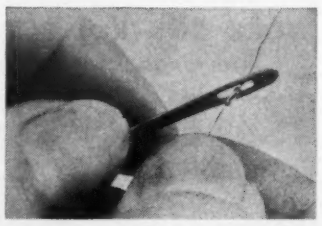
HIGH SPEED HOLE SAW
9/16 to 6-in. diameter sizes



Clean, round holes with 9/16 to 6-in. diameters are cut at high speed in various metals and other materials by line of Moly hole saws used in both portable power or machine tools. Edge of saw is welded to a tough alloy-steel back which in turn is welded to the steel body. Saw cuts a slightly larger hole than the body diameter to allow it to follow through its own hole. • **Clemson Bros., Inc.**, 22 Cottage Ave., Middletown, N. Y.

▲ For more details circle NED-652 A on enclosed inquiry slip ▲

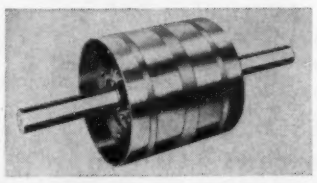
MICROMINIATURE LAMP
for transistorized system uses



Light output of 100 millilumens at 1.5 v input and an efficiency of 1.5 lumens per watt are claimed for the Mite-T-Lite, a micro-miniature incandescent lamp. It has applications in transistorized electronic, computer, and missile circuits. Lamp has a diameter of 0.040 in. and a length of 0.125 in. Platinum wire leads have a 0.005-in. diameter. Lamp can be operated directly from the output of a transistor. • **Sylvania Electric Products Inc.**, 730 Third Ave., New York 17, N. Y.

▲ For more details circle NED-653 A on enclosed inquiry slip ▲

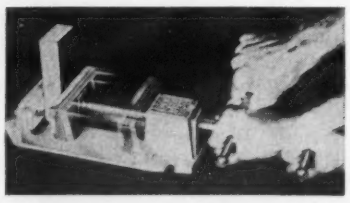
LARGE MAGNETIC PULLEYS
in diameters up to 48 in.



Line of Indox V permanent magnet pulleys has been expanded to include 30, 36, 42, and 48 - in. diameters for heavy-duty tramp iron and cobbing uses in mining operations and in coal-burning power plants. These sizes supplement 12 and 24-in. diameters currently available. Indox V is a highly oriented barium ferrite ceramic magnet material with performance equal to electromagnetic types. • **Stearns Magnetic Products**, 635 S. 28th St., Milwaukee 46, Wis.

▲ For more details circle NED-654 A on enclosed inquiry slip ▲

DRILL PRESS VISES
now offered in three jaw widths



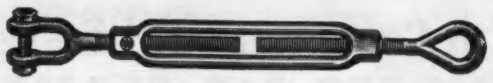
Jaw widths of 3½ and 6 in. have been added to the original 4½-in. wide Wilton drill press vise line. Each size includes models with conventional screw action and with a rapid action nut for quick jaw adjustment. Machined horizontal and vertical V-grooves hold round work in the ductile alloy steel jaws. Maximum openings are 4, 4⅝, and 6 in. Vises may be used on their sides. • **Wilton Tool Mfg. Co.**, 9525 Irving Park Rd., Schiller Park, Ill.

▲ For more details circle NED-655 A on enclosed inquiry slip ▲

LABEL CODER
attaches to labelling machine

Series 450 Rolacoder, a self-powered labelling machine attachment, imprints a code date or other legend on a label after it is applied to bottle, jar, or other package. The 1¼ x 1½ x 2¼-in. friction-driven device may be installed vertically or horizontally to imprint from side, above, or below on all types of roll-through labellers. It positions each imprint in the same location on each label. Interchangeable rubber type and ink of various colors are used. • **Adolph Gottscho, Inc.**, 6 Terminal Rd., Hillside 5, N. J.

▲ For more details circle NED-656 A on enclosed inquiry slip ▲



Where the STRAIN is HEAVY

WILCOX-CRITTENDEN

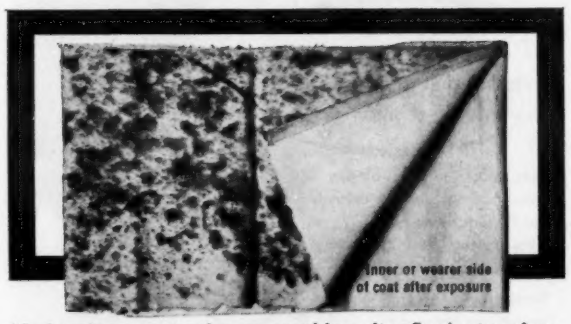
At Wilcox-Crittenden we've been making forged hardware for about 112 years. Most of it has gone on ships where the strain is heavy . . . where a failure might mean disaster. ✓ ✓ ✓ This kind of quality seems to appeal to a lot of people who want the security of extra quality. ✓ ✓ ✓ We have a distributor near you who will prove what we say about quality. Or if you prefer send for our Catalog #300 which shows a complete line of Industrial Hardware.

WILCOX-CRITTENDEN
Division, North & Judd Manufacturing Co.
67 South Main St., Middletown, Conn.

▲ For more details circle NED-657 A on enclosed inquiry slip ▲

WITHSTANDS 3000°F MOLTEN SPLASH!

NEW AO "THERMOGARB" ASBESTOS CLOTHING



No burning, penetration or scorching after 7 minutes of exposure, 8 feet from the pour! A 30" long coat of the NEW lightweight asbestos weighs approx. 3¾ lbs as against conventional asbestos coats of 6½ lbs — or about the same weight as aluminized asbestos coats of same length. Available in a complete line of body protection. Your nearest American Optical Safety Products Representative can supply you.

Always insist on Trademarked Safety Products

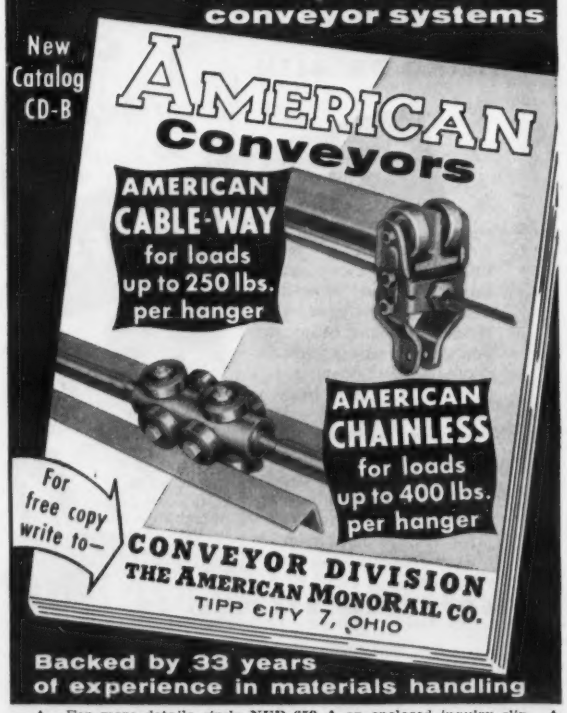
American Optical COMPANY SAFETY PRODUCTS DIVISION

SOUTHBRIDGE, MASSACHUSETTS *Safety Service Centers in Principal Cities*

▲ For more details circle NED-658 A on enclosed inquiry slip ▲

CUT PRODUCTION COSTS!
Two dependable conveyor systems

New Catalog CD-B



Backed by 33 years of experience in materials handling

▲ For more details circle NED-659 A on enclosed inquiry slip ▲

The BEST WAY
to operate D-C Motors from A-C Lines

Variac® MOTOR SPEED CONTROLS

- ★ Control DC Shunt, Compound or Series Motors from AC Lines
- ★ NO Electronic Tubes — No Warm-Up — Always Ready to Go
- ★ Rated Torque at ANY Motor Speed from Rated to Stalling
- ★ Practically INSTANT Start-Stop-Reverse with One Switch
- ★ No Torque Pulsation
- ★ Armature Overload Protection
- ★ Low First Cost — Low Maintenance — Simple Installation
- ★ Ten Models for Motors up to ¾ hp; Either Cabinet Mounted, or Stripped Down. Illustrated is Type 1701-AK for D-C shunt motors up to 1/15th hp: **$85.00.**

Write for VARIAC® Speed Control Bulletin

GENERAL RADIO COMPANY
WEST CONCORD, MASSACHUSETTS

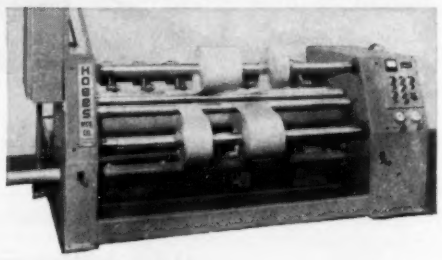
Broad Avenue at Linden, Ridgefield, N. J. NEW YORK AREA 1000 N. Seward St. LOS ANGELES 38 8055 13th St., Silver Spring, Md. WASHINGTON, D. C. 1150 York Road, Abington, Pa. PHILADELPHIA 1186 Los Altos Ave., Los Altos, Calif. SAN FRANCISCO 6605 W. North Ave., Oak Park, Ill. CHICAGO In CANADA: 99 Floral Parkway, TORONTO 15

▲ For more details circle NED-660 A on enclosed inquiry slip ▲

HOBBS *Slitter Line*

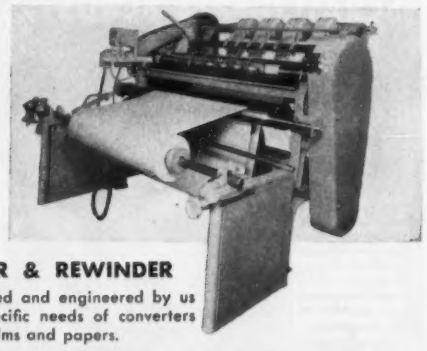
SIZES — 30" to 72"

precisely fits every need



72" SLITTER & REWINDER
Engineered by us for specific needs of a major foil company, processing PVC film.

MEDIUM SIZE SLITTER & REWINDER
Engineered by us for a major paper converter, processing paper to be slit and rewound to varying widths and diameters.



30" SLITTER & REWINDER
Moderately priced and engineered by us to meet the specific needs of converters for processing films and papers.

Tell us your slitting-rewinding needs

Our basic Hobbs Line includes slitters from 30" to 72", with speeds 200' to 1,000' per minute—at prices from $2,500 to $25,000—to slit various materials from PVC film to paper. To meet your needs, we engineer your Hobbs Slitter Rewinder installation so that "the equipment grows out of the job"—doing your work as specified.

Slitter bulletin on request.

HOBBS
Winders • Hand & Power Shears
Slitters • Die Presses
Automatic Cutters

Manufacturing Company
41A Salisbury St., Worcester 5, Mass.
Branch Offices & Representatives in Irvington, N. J., Chicago, Cleveland, Greenville, S. C., Louisville, Toronto and other principal cities.

144-9

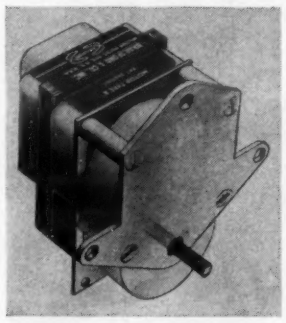
▲ For more details circle NED-661 A on enclosed inquiry slip ▲

POLYETHYLENE TOTE BOXES
24 x 17½ x 8-in. size offered

Large rigid polyethylene tote boxes that are light and strong, resist boiling water, and can be steam cleaned are now available. They will retain their strength at low temperatures and resist acids, alkalies, and degreasing compounds. Stacking tray with movable partitions shown at right measures 24 x 16 x 7 in., whereas tray at left, which will either nest or cross stack, measures 24 x 17½ x 8 in. • **Forbes Products Corp.**, 625 S. Goodman St., Rochester 20, N. Y.

▲ For more details circle NED-662 A on enclosed inquiry slip ▲

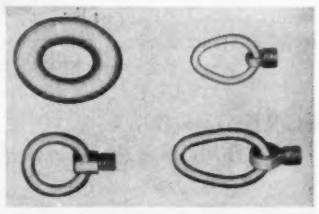
INSTRUMENT MOTOR
has low power drain, high torque



An integral reduction gear assembly provides a wide selection of output speeds in the Type B fractional watt direct-current instrument motor. It has a rigid polyethylene case, Alnico rotor, stainless steel shaft, and ball bearings. Operating range is −50 to 160° F. Unidirectional starting prevents operation if battery voltage is reversed. Output torque is up to 40 oz-in. at 1 rpm. Motor is available with 3, 6, 12, or 24-v dc windings. • **Brailsford & Co.**, 670 Milton Rd., Rye, N. Y.

▲ For more details circle NED-663 A on enclosed inquiry slip ▲

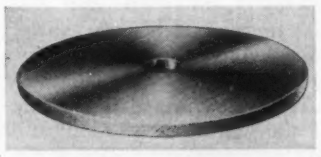
TIE-DOWN RINGS
capacities to 25,000 lb



Capacities of 5000, 10,000, and 25,000 lb are available in line of tie-down rings, plate nuts, and eyebolts used for handling cargo on flat cars, aircraft, ships, or highway vehicles. Lightweight lunette has maximum draw-bar pull of 30,000 lb. Devices are engineered to meet military and commercial requirements. • **Puritas Metal Products Co.**, 16116 Puritas Rd., Cleveland 35, Ohio.

▲ For more details circle NED-664 A on enclosed inquiry slip ▲

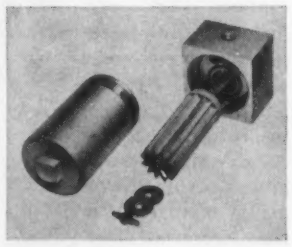
CAM BLANKS
for Swiss-type screw machines



Meehanite cam blanks for Swiss-type screw machines provide excellent wear resistance without heat treating. Disc types, ground on both sides, are available in 110 x 7 x 20-mm to 190 x 10 x 24-mm sizes. Bell-type blanks are available in sizes from 120 x 52 x 10 mm to 160 x 132 x 24 mm. Ring cams are also supplied in a range of sizes. Blanks can be flame hardened, if desired. • **American Cam Co.**, Box 2106, Hartford, Conn.

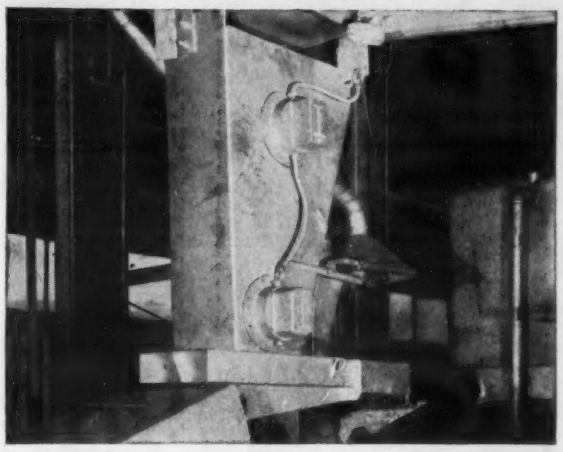
▲ For more details circle NED-665 A on enclosed inquiry slip ▲

HYDRAULIC FLUID FILTER
has reinforced sintered element



Reinforced sintered bronze 40-micron filter element of this hydraulic fluid filter will not disintegrate under a pressure drop of 400 psi caused by the accumulation of foreign matter. If element cracks at pressure drops higher than 400 psi, downstream components are protected from particles and small pieces of the element. Reusable element can be cleaned by solvent washing and reverse blowing without disturbing piping connections. Filter area is 35 sq in. in the ⅜ size. A twin element assembly is available for ¾-in. pipe connections. Unit is rated for 1000 psi. • **GPE Controls, Inc.**, 240 E. Ontario St., Chicago 11, Ill.

▲ For more details circle NED-666 A on enclosed inquiry slip ▲



Jeffrey BIN-EYE®
sees and controls bin levels

The BIN-EYE tells an operator how full or empty a bin is—controls equipment feeding a bin or shuts off flow when contents run low. It can maintain a definite level of material in a bin.

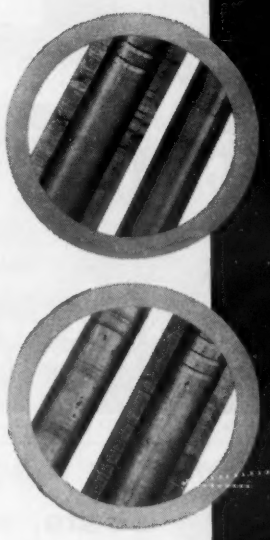
The BIN-EYE combines an attractive streamlined appearance with simplicity of construction, positive automatic operation and low cost. Rugged, yet lightweight, it is suited to operations where light, fine mesh materials demand a sensitive control; also for those using heavy, fine mesh materials.

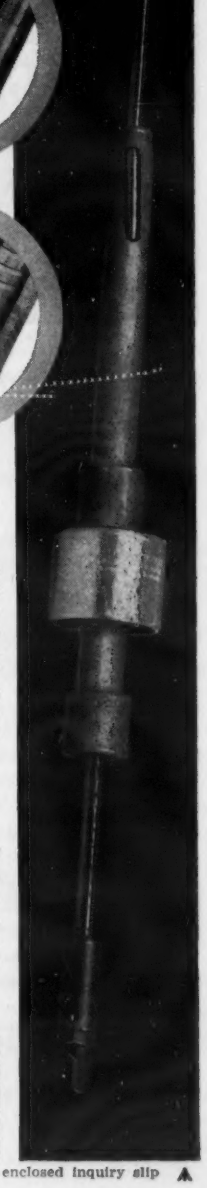
For data and a price on the BIN-EYE, write The Jeffrey Manufacturing Company, 952 North Fourth Street, Columbus 16, Ohio.

JEFFREY

▲ For more details circle NED-667 A on enclosed inquiry slip ▲

NEW ELLIOTT TUBE EXPANDERS
roll tubes into thick sheets in one pass





Better Seal...Smoother surface...
Much Faster operation

This new concept in tube expanders was developed by Elliott to roll the thickest tube sheets. Using a continuous-rolling method, it eliminates many problems common to step-rolling, may be operated protractively or retractively, saves time, assures uniform, smooth surfaces, avoids annular voids or erratic tube inside diameters, provides better seal.

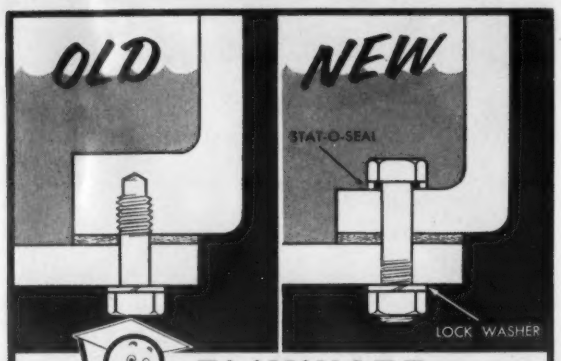
Accessories

Elliott also makes a complete line of retubing accessories, including both electric and air magnetic Tube Rolling Controls, Tube Gages, Tube Plugs, Tube Cutters, etc.—in addition to a complete line of tube expanders. *Ask for Bulletin Y-52.*

ELLIOTT Company
LAGONDA PLANT
SPRINGFIELD, OHIO

Y9-5A

▲ For more details circle NED-668 A on enclosed inquiry slip ▲



ELIMINATE BLINDHOLES WITH...

Stat-O-Seal

The unique design of Stat-O-Seals and their exceptional sealing effectiveness enable engineers and designers to save costs in many ways—*eliminating blind holes is one of them.*

Why not find out about the many plus features of Stat-O-Seals for sealing studs, bolts, other fasteners and fittings.

Write for free catalog.

Parker SEAL COMPANY
Culver City, California and Cleveland, Ohio
A DIVISION OF PARKER-HANNIFIN CORPORATION

For more details circle NED-670 A on enclosed inquiry slip

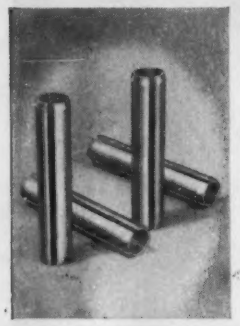
PRECISION ANGULAR SET-UPS

MAGNA-LOCK SINE

Set up and go in *minutes!* No dials, scales, fixtures—just standard gauge blocks. Powerful electrical and permanent magnet models. Also inspection plates. Write Dept. NM160.

MAGNA-LOCK, INCORPORATED
BIG RAPIDS, MICHIGAN, U.S.A.

For more details circle NED-671 A on enclosed inquiry slip



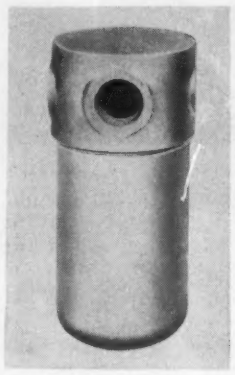
Cut fastening costs, save assembly time with SEL-LOK spring pins

Drill an ordinary-tolerance hole; drive a SEL-LOK—with hand tools or automatic assembly fixtures. That's all there is to installing these slotted tubular pins that lock by spring action. They will not work loose, yet can be removed and reused repeatedly. SEL-LOK spring pins eliminate costly tapping, reaming, peening and milling operations, as well as the rejects associated with close tolerances. They simplify design, save assembly time in countless applications . . . as keys, axles, cotter pins, hinge pins, stop pins or pivots . . . in metal assemblies or in products of nylon, Bakelite, hard rubber or fiber. Your SEL-LOK distributor stocks spring pins in carbon steel (plain or cadmium plated), corrosion-resistant steel and in beryllium copper. See him for complete details or write direct for Bulletin 2331 and samples.

INDUSTRIAL FASTENER Division SPS
JENKINTOWN 24, PENNSYLVANIA

For more details circle NED-672 A on enclosed inquiry slip

HYDRAULIC FILTER element is readily accessible



Usable on either pressure or suction side of a pump, this hydraulic in-line filter protects hydraulic machinery and oil recirculating equipment. The filter element is readily accessible for cleaning or replacement. Filter has two "in" and one "out" ports and is supplied with an extra port plug for closing either port when not used. Maximum operating pressure is 150 psi. Sintered metal element for 51 to 123-micron filtration and a wire cloth element for 125-micron filtration are made in 10, 20, and 40 gpm flow rates. • **Arrow Tools, Inc.**, 1910 S. Kostner Ave., Chicago 23, Ill.

For more details circle NED-673 A on enclosed inquiry slip

CARTON STITCHER accommodates cartons 31 in. deep

This Scotch model carton stitcher is a small version of the Heller Bottom Stitcher, yet has a full size stitching head that does not require oiling. Unit will accommodate cartons 31 in. deep. It drives steel staples with "soft toe" action and can be moved about easily. Legs of the staples form a convex lock which cannot open. • **Heller Roberts Mfg. Corp.**, Heller Industrial Fastener Div., 6151 Carnegie Ave., Cleveland 3, Ohio.

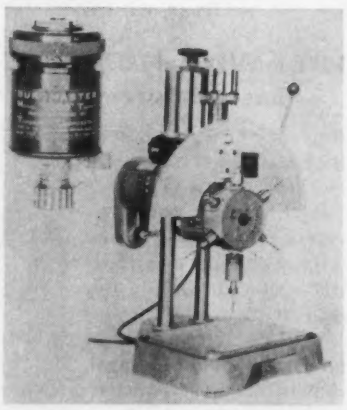
For more details circle NED-674 A on enclosed inquiry slip

FORK TRUCK 6000-lb capacity unit has 10-ft mast

All-weather, indoor-outdoor, 6000-lb capacity Pacer fork truck, available with standard 10 ft or optional 7-ft mast, will go over rough terrain in severe mud or snow conditions. The front-wheel driven unit has Roadbuilder 14:00 x 24:00 tires for stable travel over railroad tracks, timbers, and bumps. Short wheel base and oscillating rear steering axle facilitate maneuvering in cramped space. Truck is powered by 73-bhp F-226 Continental engine and will travel 30 mph. All units have power steering and torque conversion for smooth handling. • **American Road Equipment Co.**, 4201 N. 26th St., Omaha, Nebr.

For more details circle NED-675 A on enclosed inquiry slip

TURRET DRILL has increased tapping capacity



Drilling, reaming, tapping, counterboring, countersinking, and spotfacing operations are performed by the Burgmaster bench model turret drill. It has a 1/4-in. drilling capacity in steel with its six-spindle, power-indexing turret drill. Capacity of the improved Tapmatic Model 3000 tapper head has been increased from No. 0 to 6 to No. 00 to 10-24 in steel. Driving torque is easily adjusted prior to tapping and cannot be changed while tapping. The tap stops instantly when it becomes dull, loaded, or bottoms in a blind hole. • **Burgmaster Corp.**, 15001 S. Figueroa St., Gardena, Calif.

For more details circle NED-676 A on enclosed inquiry slip

BOXES AND BASKETS

These economical steel containers are designed to carry parts on pallets, belts or overhead conveyors through all your production and assembly operations. They eliminate time-consuming transferals, even for degreasing. Stacked alongside of workers or hung in hopper racks, they provide ample supplies of parts in easy reach. Empty, they nest neatly out of the way. Nestier Boxes and Baskets are available in five convenient sizes, 12" to 36" in length. Write for information today. Dept. D-1

NESTIER ...FIRST IN SMALL PARTS HANDLING

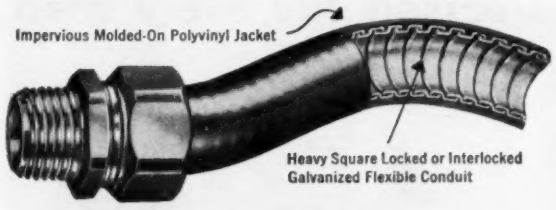
NESTIER CORPORATION Subsidiary of THE METAL SPECIALTY CO.
4519 Este Ave., Cincinnati 32, Ohio

For more details circle NED-677 A on enclosed inquiry slip

Moisture just can't penetrate

LIQUATITE®

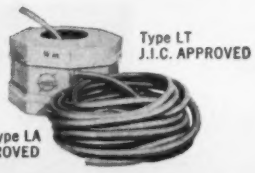
FLEXIBLE LIQUID-TIGHT WIRING CONDUIT



. . . nor can grease, dirt, oils, alcohols or most other corrosive vapors, acids, or other harmful elements. Circuits are *completely* protected.

Liquatite can be installed as quickly and easily as Flexible Conduit, yet assures the protection of Rigid Conduit. It follows contours, absorbs motion, vibration and shock indefinitely.

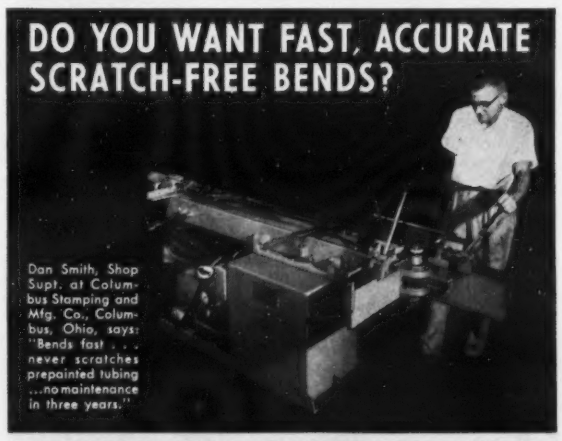
Find out why Liquatite is serving industry everywhere. Write today for free sample, costs and name of Distributor nearest you.



ELECTRI-FLEX COMPANY
P.O. BOX 128H • ROSELLE, ILLINOIS

For more details circle NED-678 A on enclosed inquiry slip

DO YOU WANT FAST, ACCURATE SCRATCH-FREE BENDS?



Dan Smith, Shop Supt. at Columbus Stamping and Mfg. Co., Columbus, Ohio, says: "Bends fast . . . never scratches prepainted tubing . . . no maintenance in three years."

FAST, VERSATILE MODEL 1400 BENDS TUBING, BARS, PIPE, ANGLES, CHANNELS, ROLLED SHAPES OR EXTRUDED PARTS

- SAVES TIME, CUTS COSTS — on production, experimental, maintenance or small lot bending jobs.
- ELIMINATES WORKPIECE INTERFERENCE—on jobs with multiple planes, odd shapes. Pivoting top assembly and double tool holder ways on arms permits two-minute change from right-hand to left-hand bending.
- ACCURATE HYDRAULIC POWER—with convenient controls bends consistently to ± 1/2° tolerance.
- PRODUCTION CAPACITY—smooth, low-cost bends at speeds of 300 to 400 an hour; material up to 1 1/4" O.D. tubing.

WRITE TODAY FOR CATALOG 356

PINES ENGINEERING CO., INC.
Specialists in Tube Fabricating Machinery 640 WALNUT • AURORA, ILLINOIS

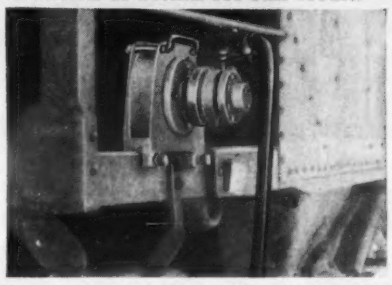
PRODUCTION BENDING • DEBURRING • CHAMFERING MACHINERY

For more details circle NED-679 A on enclosed inquiry slip

VIBROLATOR®

CCVP 3000 HOPPER CAR SHAKER

must unload hopper cars to your complete satisfaction or return for full credit.



REDUCE LABOR AND AVOID DEMURRAGE

Light weight for complete portability (72 lbs.), the CCVP 3000 is guaranteed to exceed the performance of any size portable hopper car shaker. Equipped with simple quick attach integral mount and convenient carrying handle, one man can quickly and easily do all your hopper car unloading operations. Also used for materials movement from massive bins, hoppers, chutes and screens.

VIBROLATOR is Martin's reg. trade mark for its vibration inducers and vibrator accessories—available in many sizes, "pocket watch" to most powerful portable unit built. WRITE FOR LITERATURE GIVING COMPLETE SPECIFICATIONS and APPLICATION DETAILS.

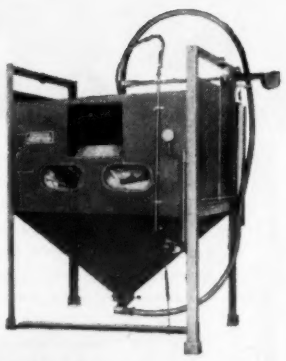
MARTIN ENGINEERING COMPANY
155 Nedlow St. Neponset, Illinois

▲ For more details circle NED-680 A on enclosed inquiry slip ▲

For fast cleaning of small work . . . Pangborn Blast Cleaning Cabinet

Perfect for small or intermittent jobs! Use the Pangborn Cabinet for production or maintenance . . . with any abrasive at almost any air pressure. Cleans quickly and thoroughly, operates economically and safely. Shipped fully assembled.

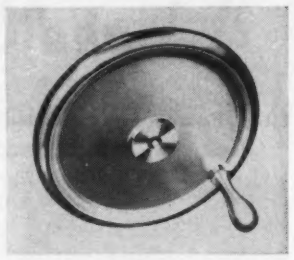
Pangborn Corporation, 2400 Pangborn Blvd., Hagerstown, Md. **Manufacturers of Blast Cleaning and Dust Control Equipment**



Pangborn
BLAST CLEANS CHEAPER

▲ For more details circle NED-681 A on enclosed inquiry slip ▲

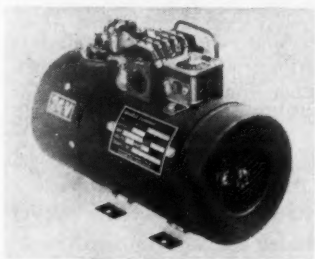
HANDWHEELS
two styles in 4 to 15-in. diameters



Straight and offset or dished web styles are available in these solid web handwheels, made of cadmium plated fine grain cast iron. Diameters range from 4 to 15 in. Wheels have a high safety factor for high speed applications, plus a modern appearance. They are offered as castings only, or completely machined with solid or revolving handle or no handle. • **Machine Products Corp.**, 6771 E. McNichols Rd., Detroit 12, Mich.

▲ For more details circle NED-683 A on enclosed inquiry slip ▲

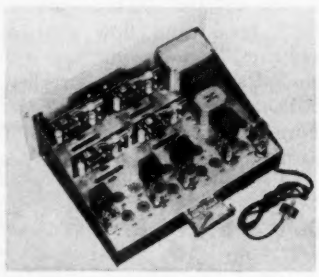
MULTIFUEL AIR HEATER
easily installed in any position



Weighing less than 10 lb, this 15,000-Btu per hour forced air heater is suited for use in trucks, vans, aircraft, boats, and shelters, as well as for operation as an engine preheater. The 5½ x 10⅜ x 8⅜-in. unit is easily installed in any position. Its combustion chamber insures instantaneous ignition, even at subzero temperatures. Heater operates on all common liquid fuels and can be equipped with manual or thermostatic control. • **Benmar Co.**, 3189 W. 33rd St., Cleveland 9, Ohio.

▲ For more details circle NED-684 A on enclosed inquiry slip ▲

TELEMETERING SYSTEM
signals remote station operation



Transistorized telemetering system allows operation of remote equipment stations without personnel by transmitting 200 to 450-cps tone signals to a central demodulator from up to ten telemetering modulators. Tone outputs are transmitted over a telephone line which will accommodate up to 20 modulators and two demodulators. The 3½-lb modulator can be chassis mounted in any position, requires 6 to 8 v dc power, and has ambient range of 50 to 122° F. Demodulator operates from 105 to 125 v ac. It can be furnished for less than 10 channels and expanded later by adding plug-in modules. • **Bell & Gossett Co.**, Dualex Div., Morton Grove, Ill.

▲ For more details circle NED-685 A on enclosed inquiry slip ▲

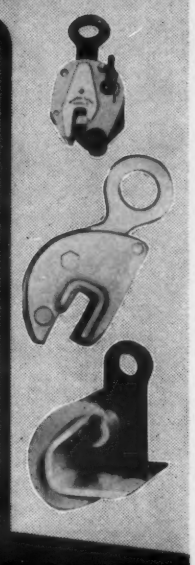
RENFROE LINE

STEEL LIFTING CLAMPS

- 14 different designs
- ½ Ton to 20 Ton Capacity
- 5 to 1 Safety factor
- All clamps safety tested
- 3 to 1 before shipment

Special design clamps available on request

See Booth #1127 1960 Nat'l. Plant Maintenance & Engineering Show



Safety Snap Lock

J. C. RENFROE & SONS, INC.
1926 SPEARING ST. • JACKSONVILLE, FLORIDA

▲ For more details circle NED-686 A on enclosed inquiry slip ▲

NEED A MEDIUM-WEIGHT GLOVE for shipping, handling, general use? The regular 151 WERX is ideal — light, sure-gripping, washable, and *outwears 8 oz. cotton 5 to 1.*

Now: Miracle Fabric Werx Gloves to Fit Each Job

Because they meet all requirements for so many work-glove jobs, industry has been buying millions of pairs of standard vinyl-*impregnated* WERX gloves *(above)*.

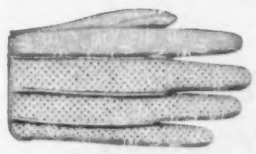
Now these "miracle fabric" gloves are also offered in lighter and heavier weights, meeting a broad range of service where goatskin, leather and 8 to 24 oz. cotton gloves have previously been used. Savings of 40% to 70% of glove costs are available.

NO. 141 WERX-LITE

2. NEED A LIGHT GLOVE for assembly or inspection workers? New "WERX-LITE" glove feels thin as linen, gives complete dexterity, yet outwears 8 oz. cotton 3 to 1.

NO. 161 SUPER WERX

3. NEED AN EXTRA TOUGH GLOVE for handling extra heavy or rough materials? New "SUPER WERX" glove is doubly durable at points of greatest wear — full palm area, thumb, and index finger. Designed to replace 18 oz. to 24 oz. cotton and many leather gloves, it outwears 18 oz. cotton 6 to 1.



NO. 153 PERFORATED WERX

4. NEED AN "AIR-CONDITIONED" GLOVE for hot weather . . . so employees keep them on, keep nuisance hand injuries minimal? With new "PERFORATED WERX", normal hand action pumps cooling air through perforated back, while dirt admission remains low. Outwears 8 oz. cotton gloves 5 to 1.

► **FREE TEST TO LISTED FIRMS:** Describe your operation, and without cost we will send samples of the most suitable WERX glove for testing on-the-job.

Edmont Manufacturing Company
1240 Walnut Street, Coshocton, Ohio
In Canada write MSA, Toronto

Edmont JOB-FITTED GLOVES

▲ For more details circle NED-687 A on enclosed inquiry slip ▲

THE NEW MILLER ALL-IN-ONE SPOT WELDER for ALL NUMBER ONE WELDS

LECTRO SPOT

Built-in Timer Turns the Trick

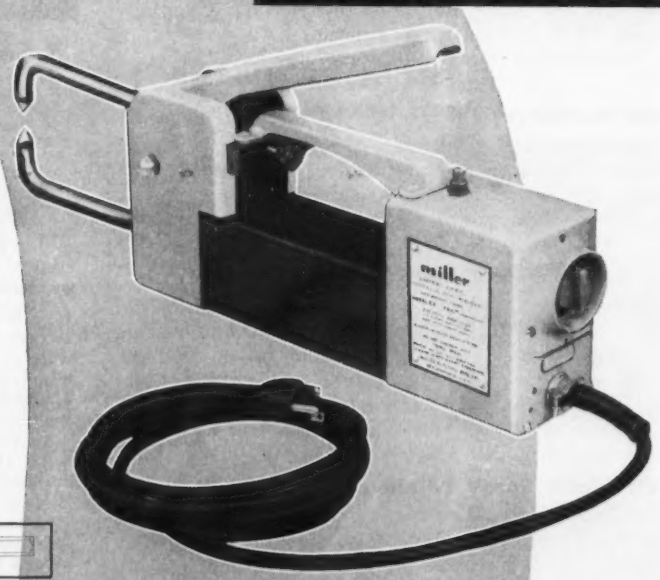
Sheet metal shops ready for new speed, economy and completely uniform spot welds will want the new Lectro Spot. Here's why:

Operator depresses lever and,
1 — 2 — 3:
Tongs grip work at pre-set pressure;
Starter switch is actuated;
Weld sequence starts and stops automatically;
Result: EVERY WELD IS IDENTICAL!

Pressure adjustment and electronic timer controls instantly accessible.

Three models in 115 or 230 volts weld mild steel of 1/8" to 3/16" combined thickness; 1.5 KVA weighs 29 lbs., 2.5 KVA weighs 39 lbs.

Wide choice of tongs available.



Complete information sent promptly.

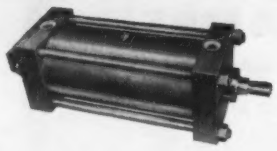
miller ELECTRIC MANUFACTURING COMPANY, INC. Appleton • Wisconsin

Distributed in Canada by Canadian Liquid Air Co., Ltd., Montreal

▲ For more details circle NED-682 A on enclosed inquiry slip ▲

Modernair HEAVY DUTY CYLINDERS

for Air or Hydraulic Service



Developed to meet the need for a rugged, reliable cylinder, for heavy mill-type service, MODERNAIR's new Heavy Duty Series are made in two types:

HA • for air service to 200 psi. HH • for hydraulic service to 1,000 psi.

Both types are available in 3¼", 4", 5", 6" bore sizes, optional stroke length.

Features include:

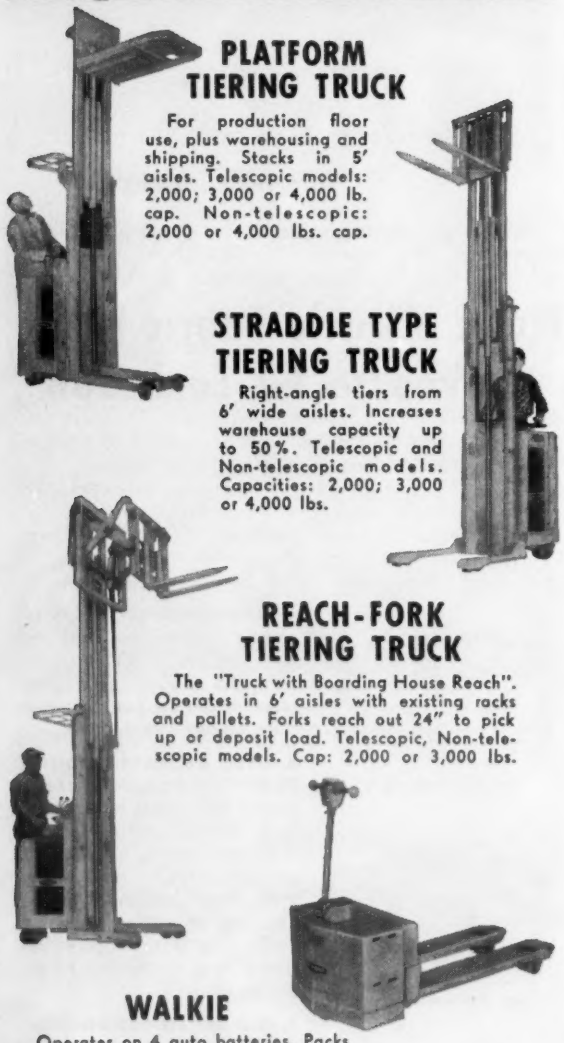
★ Rolled steel heads
★ Extra-heavy tie rods
★ Heat-treated, chrome plated piston rods
★ Self-adjusting "Uneepac" rod seals
★ Needle valve cushion adjustment

Write for catalog, prices today—or phone your local MODERNAIR distributor (listed on your phone book Yellow Pages).

Modernair CORPORATION
Dept. F, 400 PREDA STREET, SAN LEANDRO, CALIF.
Member National Fluid Power Association 31

▲ For more details circle NED-688 A on enclosed inquiry slip ▲

RAYMOND ELECTRIC TRUCKS



PLATFORM TIERING TRUCK

For production floor use, plus warehousing and shipping. Stacks in 5' aisles. Telescopic models: 2,000; 3,000 or 4,000 lb. cap. Non-telescopic: 2,000 or 4,000 lbs. cap.

STRADDLE TYPE TIERING TRUCK

Right-angle tiers from 6' wide aisles. Increases warehouse capacity up to 50%. Telescopic and Non-telescopic models. Capacities: 2,000; 3,000 or 4,000 lbs.

REACH-FORK TIERING TRUCK

The "Truck with Boarding House Reach". Operates in 6' aisles with existing racks and pallets. Forks reach out 24" to pick up or deposit load. Telescopic, Non-telescopic models. Cap: 2,000 or 3,000 lbs.

WALKIE

Operates on 4 auto batteries. Packs twice the power of ordinary walkies—12 volts for normal use, 24 volts for extra power. 3 speeds, exclusive safety control, 4,000 lb. capacity.

MAIL THIS COUPON

The RAYMOND CORPORATION
4129 Madison St., Greene, N.Y.
Please send Bulletins on RAYMOND Electric Trucks checked below:

☐ Straddle Type Tiering Truck ☐ Walkie Electric Truck
☐ Reach-Fork Tiering Truck ☐ Platform Tiering Truck

NAME TITLE
COMPANY
STREET
CITY STATE

▲ For more details circle NED-689 A on enclosed inquiry slip ▲

New Literature and Catalogs

Fluid Power Equipment

Oilgear Co.—Variable and constant delivery, duplex, and automatic feed pumps; constant displacement, Oilgearducers, and variable displacement motors; variable speed transmissions; servo components; cylinders; and valves are among the Oilgear fluid power equipment described in 16-page Bulletin 10051-H. All information needed to aid in selecting the proper equipment for specific needs is offered in condensed form.

▲ For more details circle NED-690 A on enclosed inquiry slip ▲

Precision Balls

Hartford Steel Ball Co.—Offered as a design and engineering reference, 20-page catalog "Precision Balls" covers balls made of carbon-chrome alloy, stainless steels, aluminum, brass, bronze, carbon steel, glass, nylon, plastics, and other materials. Technical data include material specifications, mechanical properties, hardness, weight, and other information. The new AFBMA Ball Standards are given and cross referenced with previous standard.

▲ For more details circle NED-691 A on enclosed inquiry slip ▲

Processing Equipment

Cochrane Corp., Pottstown Metal Products Div.—Facilities of this company to engineer and produce fabrications for the chemical, petroleum, paper, paint, power, pharmaceutical, food, and nuclear industries are detailed in illustrated bulletin. Typical equipment made to user's needs includes welded vessels, shells, and reactors.

▲ For more details circle NED-692 A on enclosed inquiry slip ▲

Industrial Controls

General Controls Co.—Controls for a wide range of industrial needs are described in illustrated catalog. Types covered include automatic temperature, pressure, level, and flow controls as well as counters, switches, and automation controls. Other items included are actuators, controller-indicators, and pressure indicators. Details are given on Hammel-Dahl and Foster Engineering lines, as well as on relays, transformers, and time switches.

▲ For more details circle NED-693 A on enclosed inquiry slip ▲

Do's & Don't's of Grinding Safety

Grinding Wheel Institute—Ten do's and don't's for grinding wheel operator safety are listed on 13½ x 13½-in. wall chart for display in toolrooms, on bulletin boards, and in grinding machine departments. Information is based on rules and regulations of the American Standard Safety Code.

▲ For more details circle NED-694 A on enclosed inquiry slip ▲

Product Publicity Guide Book

The 8th edition of "Bacon's Publicity Checker" lists name of publication, address, editor, publication date, and circulation of 3567 business, trade, consumer, and farm publications. These magazines are classified as to type or market served, and coding indicates class of publicity release material each accepts. This 352-page book lists for $25. Published by Bacon's Clipping Bureau, 14 E. Jackson Blvd., Chicago 4, Ill.

▲ For more details circle NED-695 A on enclosed inquiry slip ▲

Metal Fasteners

Atlas Screw & Specialty Co.—1960 catalog tabulates complete data on line of threaded and headed fasteners. Prices are included to aid in ordering.

▲ For more details circle NED-696 A on enclosed inquiry slip ▲

How to Grind Mill Rolls

Landis Tool Co.—Such information as speeds, feed rates, wheel dressing, coolants, lubrication, and wheel types is included in 20-page handbook on the correct procedure for grinding the body of mill rolls. Roll grinding problems and their solutions are discussed.

▲ For more details circle NED-697 A on enclosed inquiry slip ▲

Electrostatic Spray Painting

Ransburg Electro-Coating Corp.—"Spray Painting with the Electrostatic Hand Gun" is title of 12-page brochure which discusses the operating principle and use of this gun which employs centrifugal force to atomize paint and electrostatic attraction to assure complete dripless product finishing. Paint savings of up to 90 per cent are reported in case studies.

▲ For more details circle NED-698 A on enclosed inquiry slip ▲

One Man Does the Work of Three

with Amazing NEW

TROPICAL DRI-SPRAY WHITE

Get all the time and labor saving advantages of spray painting—with no disadvantages. No need for drop cloths or other protection for floors, desks, or machines when painting inside. Overspray dries as it falls and is dusted or swept away.

Tropical DRI-SPRAY WHITE is a product of the combined research facilities of Parker Rust Proof and Tropical Paint. It beautifies and gives heavy-duty protection to wood, metal, concrete or plaster surfaces indoors. Learn how you can save with Tropical DRI-SPRAY WHITE. Write for free information today!

PARKER RUST PROOF PRODUCTS

HEAVY-DUTY MAINTENANCE PAINTS SINCE 1883

TROPICAL PAINT COMPANY
1124-1222 W. 70th, Cleveland 2, Ohio
SUBSIDIARY OF PARKER RUST PROOF COMPANY

▲ For more details circle NED-699 A on enclosed inquiry slip ▲

small valves...big capacity...
fast cycling...low price

Humphrey "Quick-Dump" CONTROL VALVES

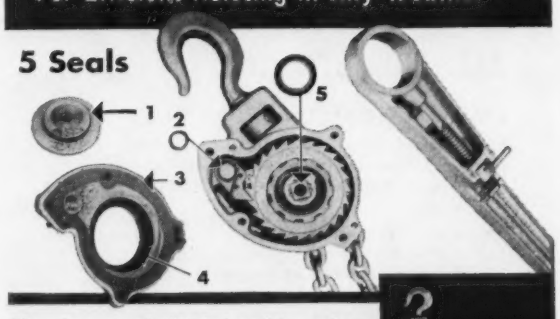
These Humphrey Valves are brand new in design and performance. Use them for valving air, oil, water, other liquids, gases, up to 125 psi. Also vacuum. Their big capacity, fast opening, quick exhausting, and smooth, positive action are like nothing you've ever seen before. Cycling speeds up to 30,000 per hour! Wide range of ⅛", ¼" and ½" models for manual, electric, piloted operation. 2-way, 3-way, 4-way types. Three methods of mounting—in line, manifold mounting, or new cartridge type for inserting internally in manifold. Readily engineered for OEM applications.

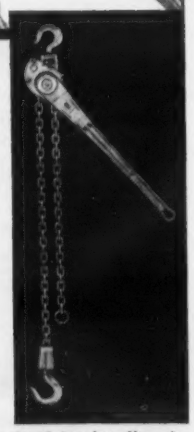
Write today for bulletin

Humphrey PRODUCTS DIVISION
DIVISION GENERAL GAS LIGHT CO.
Kalamazoo, Michigan

▲ For more details circle NED-700 A on enclosed inquiry slip ▲

NEW COFFING SEALED HOIST
For Efficient Hoisting in Any Weather





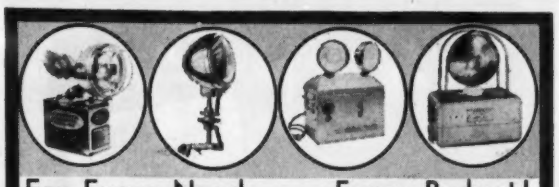
Here is a new hoist designed for safe, efficient hoisting in any weather. Loads will not slip because the brake mechanism is permanently sealed in five places against moisture, oils, chemicals and dirt—all common causes of hoist slippage.

Safety features include the exclusive Safety Handle which bends to indicate overload. The free chain control is protected so that it will not accidentally trip.

Five models, ¾, 1½, 3, 4½ and 6-ton capacities are available. Ask your distributor for Bulletin ADH-78.

COFFING HOISTS
DUFF-NORTON COMPANY
803 Walter St. • Danville, Ill

▲ For more details circle NED-701 A on enclosed inquiry slip ▲



For Every Need . . . Every Budget!

MAKE YOUR OWN CHOICE!

There are complete lines of Carpenter Emergency Lights for all basic needs . . . the widest choice of powerful, dependable, durable lights available.

WARNING LIGHTS: Vehicle and stationary types . . . colored, flashing, oscillating, revolving!
HANDLIGHTS: Powerful "Portalites" with the famous extra-wide coverage! Rechargeable or dry battery types.
VEHICLE LIGHTS: Searchlights, floods, colored signal and warning lights for all service and emergency vehicles.
PANIC LIGHTS: Watchmaster "Automatalites" automatically guard against light failures. All types including explosion-proof, dust-tight, and remote control.

Your Guide to over 100 Emergency Lights . . . the Carpenter Catalog. Write for copy.

CARPENTER MFG. COMPANY
637 Bradley Street, Somerville 45, Mass. Telephone MOnument 6-4300

▲ For more details circle NED-702 A on enclosed inquiry slip ▲

SEND FOR: FREE INDUSTRIAL CATALOG

RUSCOE Epoxy CEMENT and FILLER
Strongest Bond Known

RUSCOE Safe-T-Glue
Quick-setting, strong, water-resistant adhesive for paper, cellophane, wood, metal, cloth or ceramics. All industrial sizes shipped in polyethelene containers.

B.F.Goodrich
INDUSTRIAL CEMENTS
A full line of rubber base cements. Any quantity. Any size. Ready to ship.

RUSCOE SOLVENTS
• Methyl ethyl ketone (MEK)
• Acetone • Mineral Spirits
• Lacquer thinner
ALL AVAILABLE IN STANDARD INDUSTRIAL SIZES.

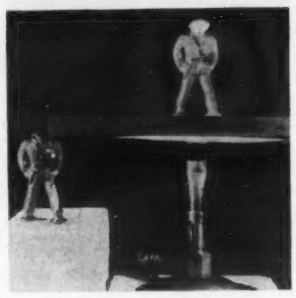
DISTRIBUTORS: HERE IS A VALUABLE LINE FOR YOU!

W. J. RUSCOE CO.
475-485 Kenmore Blvd. Akron 1, Ohio

▲ For more details circle NED-703 A on enclosed inquiry slip ▲

New Processes and Materials

THERMAL INSULATION withstands up to 6700° F



Heat flows 500 times better in one direction along the surface of Pyrographite than through it. This high density thermal insulating graphite shows possibilities in solving high-heat problems in missile, nuclear reactor, and industrial fields. It will withstand temperatures up to 6700° F. In picture, lead soldier at left is melted by heat flowing longitudinally through material, whereas soldier on the topside is unaffected. Material remains strong, chemically inert, and impermeable to gases at high temperatures. • **Raytheon Co.**, 100 River St., Waltham 54, Mass.

▲ For more details circle NED-704 A on enclosed inquiry slip ▲

ENAMEL-COATED ALUMINUM now made in widths to 60 in.

Nineteen baked-on shades are available in straight vinyl, vinyl-alkyd, and acrylic enamels on Tone-Cote enamel-coated aluminum sheet. Various alloys and specialty products are coated on one or both sides with one color, or a different color on each side. Alloy sheet is produced in thicknesses of 0.019 to 0.051 in. and in widths up to 60 in. Enamel resists chipping, flaking, peeling, blistering, and cracking without marring in present forming methods such as bending, brake and roll forming, blanking, crimping, or flattening. • **Aluminum Co. of America**, 791 Alcoa Bldg., Pittsburgh 19, Pa.

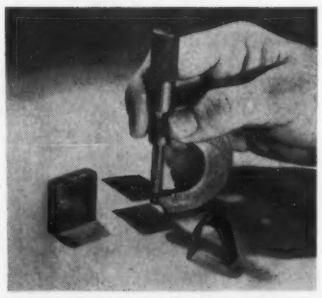
▲ For more details circle NED-705 A on enclosed inquiry slip ▲

ALUMINUM ETCHANT produces a durable satin etch

Solid form AE-16S aluminum etchant for architectural aluminum is an improvement over the formerly offered flake form etchant. It is dustless, gives off no heat of solution, is easier to handle, and is lower in cost. It produces a consistently durable satin etch, is nonscaling, and eliminates sludge, allowing tanks to be operated for longer periods between cleanings. Solid etchant block is packed in a 90-lb metal container and is put in solution in a few minutes with a minimum of agitation. • **Pennsalt Chemicals Corp.**, Metal Processing Dept., 3 Penn Center, Philadelphia 2, Pa.

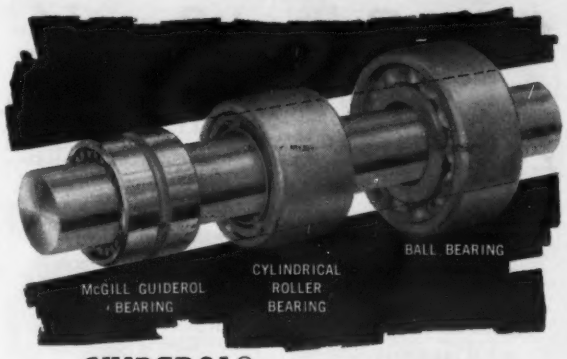
▲ For more details circle NED-706 A on enclosed inquiry slip ▲

FORMABLE DENSE METAL can be worked to many shapes



Mallory 3000 high density metal can be cold worked and formed in a wide range of shapes for use as weights, counterweights, and radiation shielding. Tests of metal cold rolled to a 52 per cent reduction show ultimate tensile strength of 195,000 psi, yield strength of 190,000 psi, and proportional limit of 90,000 psi. At 2000° F, short time tensile strength is 19,350 psi and elongation is 5 per cent. Hardness rating is 63.5 Rockwell A at 20° C and 42.5 Rockwell A at 800° C. Metal is available in rolled sheets or slabs from 0.010 to 0.250 in. thick, up to 8 in. wide and 40 in. long. Swaged rod of 0.062 to 0.375 in. diameter is offered in 8 to 36-in. lengths. • **Mallory Metallurgical Co.**, 3029 E. Washington St., Indianapolis 6, Ind.

▲ For more details circle NED-707 A on enclosed inquiry slip ▲



GUIDEROL® bearings save radial space and still offer greater capacity

The photo above shows three bearings mounted on a common 1" shaft. The GUIDEROL bearing shown actually has up to 23% greater load capacity than the other two bearings and saves 3/8" to 1/2" in housing space. A full complement of center guided rollers provides maximum effective capacity and prevents binding under adverse conditions in either horizontal or vertical mountings. Available in shaft sizes from 5/8" to 9 1/4"; capacities from 2880 lbs. to 128,670 lbs. (at 100 RPM).

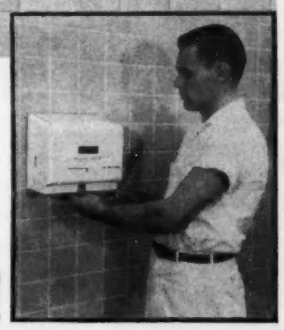
Write for helpful Bearing Handbook No. H-54-C

engineered electrical products McGILL® precision needle roller bearings

McGILL MFG. CO., Bearing Div., 101 N. LAFAYETTE ST., VALPARAISO, IND.

▲ For more details circle NED-708 A on enclosed inquiry slip ▲

Plain facts about washroom towel costs!



We have been making top quality washroom paper towels since 1925. But we know that high quality by itself will not produce the most efficient towel service.

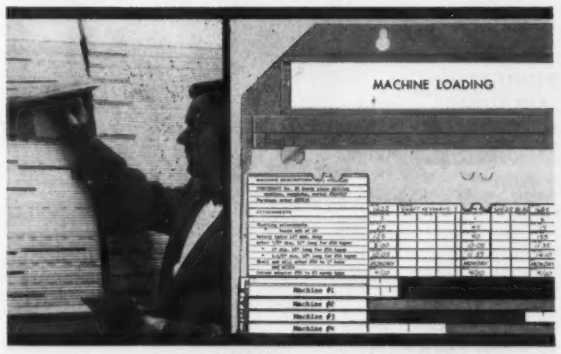
So we combine our quality towels with the controlled Turn-Towl cabinet — to produce the perfect washroom towel combination.

Result: Excellent towels at a low service cost — with towel consumption dropping as much as 50%.

MOSINEE Sulphate Towels
BAY WEST PAPER CO.
1084 West Mason Street
GREEN BAY • WISCONSIN
A Subsidiary of Mosinee Paper Mills Co.

▲ For more details circle NED-709 A on enclosed inquiry slip ▲

New low-cost way to raise output



ACME VISIBLE PLANNING PANELS make it easy to stay on top of your shop

Timing is the essence of high production at low cost. And Acme Visible Panels make it easy for you graphically to plan, schedule and follow through every job. Machine loading. Personnel assignment. Shipping. Data cards in pockets keep essential facts at your fingertips. Visible margins portray your scheduling and work progress at a glance. Send for full facts.

ACME VISIBLE
ACME VISIBLE RECORDS, INC., 3401 West Allview Drive, Crozet, Va.
Please send free booklet on production planning and control panels.
NAME_____
TITLE_____
COMPANY_____
ADDRESS_____
CITY_____ STATE_____

▲ For more details circle NED-710 A on enclosed inquiry slip ▲

Hardness Readings in 2 seconds!

Webster

PORTABLE

Hardness Testers

FOR NON-FERROUS METALS

TWO LOW-COST MODELS differing in sensitivity for rapidly testing hardness of aluminum, brass, copper, etc. No training required; one hand operation. Hardness readings in 2 seconds anywhere in shop. Can be correlated to standard hardness scales. Quick reading dial. Special anvil design tests all shapes: sheets, extrusions, tubing, strip stock. Capacity ¼". Simple, rugged design, easy maintenance.

MODEL B Direct hardness readings on all aluminum alloys.

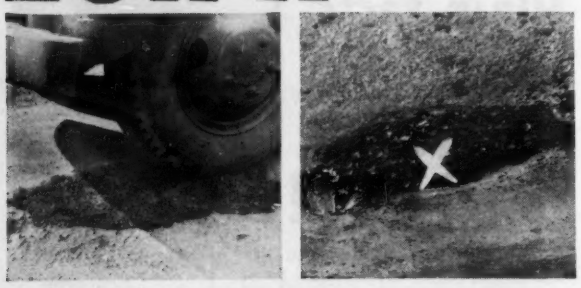
MODEL B-75 Direct hardness readings on copper, brass, etc.

Other models available

WEBSTER INSTRUMENTS, INC. Dept. N, 11856 Mississippi Ave. Los Angeles 29, California

▲ For more details circle **NED-713 A** on enclosed inquiry slip ▲

ZOR-X REPAIRS ROADWAYS IMMEDIATELY



THERE'S NO NEED to wait for warm, dry weather to fill chuck-holes in your driveway, parking lot, or any road surface. ZOR-X, the new, all-weather patching material can be used when chuck-hole is damp and in temperature as low as 15° above zero.

No special equipment is required... no base preparation or priming... simply pour it out—tamp it down—drive over it *immediately*. There is nothing to add or mix, and when used will last for years under heaviest loads.

For full details write

THE MONROE COMPANY, INC.

10703 Quebec Avenue, Cleveland 6, Ohio

▲ For more details circle **NED-714 A** on enclosed inquiry slip ▲

MODEL AG5 ACCU-FLOW AIR GAUGE

A general-purpose non-contact gauge for use as measurer or comparator on a variety of critical applications.

A new standard of accuracy...

ACCU-FLOW* by AMES

B. C. Ames has perfected a new concept of air gauging that offers extremely fine measurement and unusual stability.

AMES ACCU-FLOW air gauges give you an accurate non-contact measuring method that is ideally suited to checking size variations on continuous production items such as wire, rubber, plastics, etc. Send for free ACCU-FLOW folder.

*Trademark of B. C. Ames Co.

Representatives in Principal Cities

B.C. AMES CO.

34 Ames Street, Waltham 54, Mass.

Canadian Representative—H. C. Burton Co. Ltd., Hamilton

MANUFACTURERS OF MICROMETER DIAL INDICATORS AND GAUGES

▲ For more details circle **NED-715 A** on enclosed inquiry slip ▲

New Literature & Catalogs

Data Processing Equipment

Leeds & Northrup Co.—48-page publication N-07(1) on data processing equipment includes digital data processing and analog and digital computing systems. The well-illustrated booklet explains types of inputs, input switching, output devices, and modes of operation for electric power, petrochemical, aeronautical, agricultural, and other uses.

▲ For more details circle **NED-716 A** on enclosed inquiry slip ▲

Metallurgical Furnaces & Ovens

Marshall Products Co.—Combined into a single plastic-bound catalog are 18 spec sheets covering a line of metallurgical testing furnaces, ovens, and accessories. These furnaces perform over a range of 200 to 4000° F, operating with vacuum, air, or inert atmospheres.

▲ For more details circle **NED-717 A** on enclosed inquiry slip ▲

Electrical Insulating Varnishes

Minnesota Mining & Mfg. Co., Irvington Div.—Selection and application of electrical insulating varnishes, their electrical and mechanical properties, plus operating temperature limitations are presented in 34-page illustrated catalog. It includes charts, graphs, and illustrations on temperature conversion, solvents, specific gravity, viscosity, and other pertinent categories.

▲ For more details circle **NED-718 A** on enclosed inquiry slip ▲

Ball Bearing Units

Roberts Mfg., Inc.—Catalog No. 60 contains 24 pages of data on cast iron pillow blocks, two and four bolt flange units, and take-up units incorporating sealed precision ball bearing cartridges for ½ to 2 7/16-in. shafts or sealed commercial bearings in ½ to 1½-in. sizes. Also covered are economical commercial sealed ball bearings.

▲ For more details circle **NED-719 A** on enclosed inquiry slip ▲

Uses for Submersible Pumps

American Crucible Products Co., Kenco Pump Div.—32 practical uses for portable and other submersible pumps are outlined in 10-page illustrated 1960 catalog. Also listed are design, engineering, and performance data on various models which are available to meet practically any need.

▲ For more details circle **NED-720 A** on enclosed inquiry slip ▲

Guide to Casters & Glides

Faultless Caster Corp.—Included in Folder 91559 is a simplified replacement guide to office furniture casters. Specifications are given on a complete line of wood and office furniture casters, caster wheels, glides, and sockets. Also described is the new Royal-Roll caster with a spherical wheel and contoured horn.

▲ For more details circle **NED-721 A** on enclosed inquiry slip ▲

Direct-Fired Heater Data

Reznor Mfg. Co.—Guidance in the selection and application of gas-fired heaters, furnaces, and packaged blowers is contained in 28-page Catalog SA-5900. Tables pin-point performance figures and uses of various models. Detailed tabulations and dimensions aid in engineering, and design features are clearly shown.

▲ For more details circle **NED-722 A** on enclosed inquiry slip ▲

Stud Welding Fasteners

Standard designs and specifications of stud welding fasteners for semi-automatic welding to assemblies and products are detailed in illustrated 52-page manual. Various types of studs, pins, pads, and other welding fasteners are described, and application procedures are covered. Available only on letterhead request to K S M Products, Inc., Merchantville 8, N. J.

▲ For more details circle **NED-723 A** on enclosed inquiry slip ▲

Zoomar TV Lenses

Zoomar, Inc.—Zoomar lenses for Vidicon industrial television camera with 4:1 and 6:1 zoom ranges are detailed in 4-page bulletin. Data are included on a control box for camera and lenses.

▲ For more details circle **NED-724 A** on enclosed inquiry slip ▲

Unit Heaters

Dunham-Bush, Inc.—Both steam and hot water types of unit heaters are subject of 12-page Bulletin 1301B. Given are capacities, conversion factors, and basic formulas to aid in engineering and selection. Horizontal and vertical unit heaters are available in sizes and types for every plant heating requirement.

▲ For more details circle **NED-725 A** on enclosed inquiry slip ▲

NEW

Gast Booklet ready to give you

"APPLICATION IDEAS"

on uses of air motors, compressors, vacuum pumps

Looking for new ways to improve methods—save time—or cut costs? This booklet may be valuable to you! With line drawings, it shows dozens of the basic principles of "putting air to work".

With photographs of our customers' products—from air mixers to data plotters—it illustrates each principle...and shows how Gast rotary Air Motors, Compressors and Vacuum Pumps provide advantages as original equipment or in plant use.

Design Engineer or Plant Master Mechanic, you'll find this booklet of interest...and it may "spark" an important idea you can use!

WRITE TODAY FOR NEW "APPLICATION IDEAS" BOOKLET!

Gast Manufacturing Corp.
P.O. Box 117 -R
Benton Harbor, Mich.

GAST ROTARY
"Air may be your answer!"
- AIR MOTORS TO 7 H.P.
- COMPRESSORS TO 30 P.S.I.
- VACUUM PUMPS TO 28 IN.

▲ For more details circle **NED-726 A** on enclosed inquiry slip ▲

Just Out! Just the ticket to cut cost!

NEW SPEED CONTROL VALVE

⅛" and ¼" pipe sizes in stock now!

Now a speed control valve that regulates your cylinder movement with precision and sureness, but which lists at $3.00 and $3.25. And despite its lower costs, "CUB" features the same high quality of design and workmanship you've come to expect from Ross. "CUB'S" design stresses trouble-free operation and easy maintenance. CUB is small, aluminum and lightweight. If you use speed controls, by all means call your Ross representative or write us.

ROSS OPERATING VALVE CO.

161 E. Golden Gate Ave. • Detroit 3, Michigan

▲ For more details circle **NED-727 A** on enclosed inquiry slip ▲

Check COLONIAL RUBBER COMPANY for

- *EXPERT COMPOUNDING*
- *ACCURATE PRODUCTION*
- *QUICK DELIVERY of*

Industrial Rubber Parts

If you use molded rubber or silicone rubber parts in your products, you can use Colonial's services to advantage in one or more of the ways listed above.

Check us on your requirements, whether for compound development, parts production or both. Our rubber development laboratory, die-making machine shop and large rubber molding plant offer "packaged" service to help you reduce fabricating costs and improve product quality with COLONIAL industrial rubber parts. Write for more details, or send prints for prompt quotation.

1539A

COLONIAL RUBBER CO.

RAVENNA, OHIO

▲ For more details circle **NED-728 A** on enclosed inquiry slip ▲

NEW! Portable Electric Bag Closing Machine

HERE is a handy little machine that makes bag closing fast, easy, and economical. It is recommended where operations are limited or intermittent and do not justify installation of large, high production machines.

LIGHTWEIGHT — 9½ pounds. Carry it anywhere. No installation; requires only an electrical outlet.
POWERFUL—Exclusive top and bottom feed for greater power and production. Direct drive motor with thumb control button.
VERSATILE — Closes bags made of cotton, burlap, jute, multiwall paper, laminated paper. Produces two-thread stitch Type 401, or can be furnished to produce single-thread chain stitch Type 101.
SAFE — Anyone can operate it. No special training required. Can be obtained with overhead suspension. Also, can be supplied with pedestal bracket.

Union Special MACHINE COMPANY
Originator of Filled Bag Closing Machines
416 North Franklin Street Chicago 10, Illinois

▲ For more details circle NED-729 A on enclosed inquiry slip ▲

RIGHT *data*— RIGHT *ideas*— *to fill your*

MINIATURE LIGHTING NEEDS

For *Pilot—Dial—Indicating—Illuminant* uses, DRAKE's quick-reference catalog simplifies selection of just the *right* Miniature Lighting unit. 16 picture and fact-packed pages include detailed specifications; plus highly useful data on basic unit elements, best choices for various uses, etc. *Project Data Sheet* makes it easy to get specific recommendations for your job. Decades of specialized experience in all aspects of Miniature Lighting make DRAKE first choice for top results, best quality, greatest economy.

SEND FOR YOUR COPY!

DRAKE
MANUFACTURING COMPANY
4624 N. OLCOTT AVENUE • CHICAGO 31, ILLINOIS
MINIATURE LIGHTING SPECIALISTS

▲ For more details circle NED-730 A on enclosed inquiry slip ▲

MINNESOTA MR RUBBER

FACTS for FILING on QUAD·RINGS®

The MR QUAD-RING gives superior sealing performance in hydraulic and pneumatic applications, either static or dynamic. The four lipped design prevents the rolling effect found with O-rings, thereby eliminating the common spiral twist failure. This exclusive design features four flexible sealing lips and permits installation with less squeeze, reducing friction, breakout force and wear. QUAD-RINGS can be made out of rubber compounds which exactly match the application. You can be sure of positive sealing when you use QUAD-RING SEALS in all your installations.

- POSITIVE SEALING UNDER ALL CONDITIONS
- ELIMINATES ALL SPIRAL TWIST FAILURE
- FOUR FLEXIBLE SEALING SURFACES
- LOW FRICTION INSTALLATION
- HIGH DENSITY INJECTION MOLDED
- RUBBER COMPOUNDS TO FIT APPLICATION

FOR MORE INFORMATION AND COPY OF THE QUAD-RING APPLICATION AND INSTALLATION HANDBOOK . . .

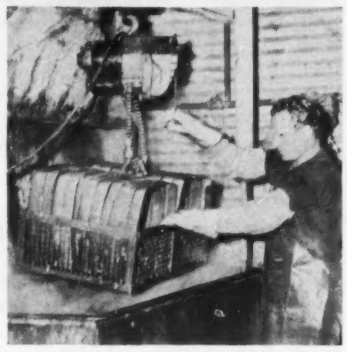
NFPA MINNESOTA MR RUBBER

WRITE DEPARTMENT 623 3630 WOODDALE AVENUE MINNEAPOLIS 16, MINNESOTA

▲ For more details circle NED-731 A on enclosed inquiry slip ▲

New Processes & Materials

PAINT & FINISH REMOVER noncorrosive to metal products

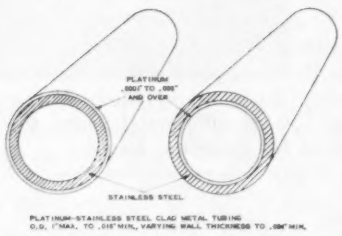


Difficult-to-remove paints and finishes are stripped without harmful corrosive effects on metal products by Epoxystrip NC-194 finish remover. Stripper removes epoxies, polyurethanes, and the new acrylics, as well as paints, lacquers, and enamels. Metal surface is left clean with no damage to the Bonderized or phosphate coating. Uses include preparing rejected parts for refinishing and removing paint from work holders. It can be used from a drum, in a dip tank, or in continuous production line. • **Beck Equipment Co.**, 3350 W. 137th St., Cleveland 11, Ohio.

▲ For more details circle NED-732 A on enclosed inquiry slip ▲

PLATINUM-CLAD STAINLESS in sheet, tube, and crucible forms

Platinum alloy inseparably clad to high nickel and chromium stainless steel is now available in the form of evaporating crucibles and dishes as well as sheet, wire, and tubing. The clad stainless strip can be rolled in thicknesses from 1/16 to 0.005 in. and in widths up to 12 in. Platinum thickness ranges from 0.0001 to 0.005 in. Tubing is offered clad on inside, outside, or both. Clad metal is as corrosion resistant as solid platinum at up to 1000° F. • **Texas Instruments Inc.**, Metals & Controls Div., 34 Forest St., Attleboro, Mass.



▲ For more details circle NED-733 A on enclosed inquiry slip ▲

ASBESTOS SHEET PACKING offered in eight basic grades

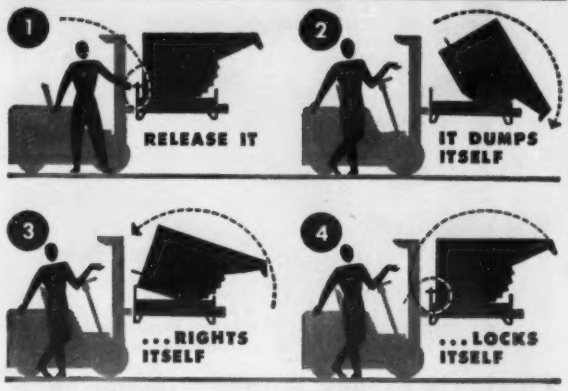
Many industrial uses are possible for this line of compressed asbestos sheet packing, made in eight basic grades in standard size sheets. According to the grade, the materials withstand steam, gas, air, gasoline, oil, hot oil, toluol, and sulphuric, nitric, and other acids. Some are suited for service up 700° F and have tensile strengths ranging up to 5000 psi. Others are suited for low temperature use. Thicknesses of ⅛, 1/16, 1/32, and 1/64 in. are available to meet MIL, ASTM, and other standards. • **Union Asbestos & Rubber Co.**, Fibrous Products Div., 1111 W. Perry St., Bloomington, Ill.

▲ For more details circle NED-734 A on enclosed inquiry slip ▲

NICKEL COATING PROCESS assures bright, smooth deposit

A bright, smooth nickel deposit is assured by the Superlume nickel plating process which involves the use of two additive agents in the original bath. One provides ductility, stress relief, and tolerance to impurities, whereas the second agent provides high brightness and scratch leveling quality. Existing baths can be converted to the Superlume process by sending a 1-gal sample of bath to company's laboratory for conversion instructions. Agitation, important to deposit uniformity and smoothness, can be provided by conveyor motion, or through mechanical, cathode rocker, or air methods. Still bath variation is available. • **Hanson-Van Winkle-Munning Co.**, Church Street, Matawan, N. J.

▲ For more details circle NED-735 A on enclosed inquiry slip ▲



Makes every truck a dump truck

It's a self-dumping hopper for fast, efficient handling of wet or dry, hot or cold bulk materials such as scrap metal, cinders, cullet, hot forgings and castings, punch press parts. Pickup is swift and simple. Forks or platform of any standard lift truck slide easily into hopper underframe. Operator picks up loaded hopper . . . transports it to destination . . . flips the latch . . . and the Roura does the rest . . . automatically. Easily cuts costs 50%. Made of ⅛" steel plate with continuous arc-welded seams. Also available in stainless steel or galvanized. Five sizes, ½ to 2 cubic yards. Standard models available for immediate shipment. Write for literature. ROURA IRON WORKS, INC. 1415 Woodland Ave., Detroit 11, Mich.

ROURA *Self-Dumping* HOPPER

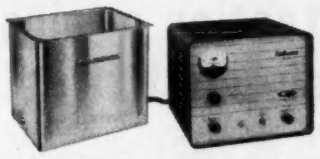
▲ For more details circle NED-736 A on enclosed inquiry slip ▲

MAMMOTH narda SONBLASTER

America's first mass-produced industrial-size ultrasonic cleaner!

SAVE *7 ways over costly solvent, alkaline or vapor degreasing:*

• Clean faster, speed production! • Cut rejects, eliminate bottlenecks! • Save on chemicals & solvents! • Eliminate expensive installation! • Cut maintenance and downtime! • Save on floor space! • Release labor for other work!



G-1501 generator, NT-1505 tank.

MAMMOTH 5-GALLON TANK $695

Other models from $175. 2-year guarantee on all units.

SPECIFICATIONS

Interior Tank size (in.), 10W x 14L x 9½H. Tank Capacity, 5 gallons.

Submersible Transducers

Model NT-604 — Hermetically sealed heli-arc welded stainless steel case. Radiating face: 27 sq. in. Effective plane of radiation: 40 to 50 sq. in. (approx. 10" x 5"). Effective cavitation of volumes: up to 1200 cu. in. at 24" tank height (5 gal.) and 2400 cu. in. at 48" tank height (10 gal.). Swagelok tube fitting on side or end for internal tank wiring.

Model NT-605 — Same as NT-604 except for bulkhead fitting on back for external wiring. Eliminates electrical conduits in solutions.

Now you can say goodbye to expensive chemicals, solvents, and degreasing equipment . . . reclaim valuable floor space . . . eliminate high installation costs . . . just by installing a Narda Series 1500 SonBlaster. At the same time, you'll get better, faster cleaning, and you'll need fewer people to do the job!

Get the tremendous activity of the new 300-watt Narda SonBlaster, with the largest transducerized tank ever made, at the lowest price in the industry! Choose from transducerized tanks or submersible transducers for use in any arrangement in any shape tank you desire. Up to 4 submersible transducers can be easily operated from the same generator at one time; load selector switch provided — an exclusive Narda feature.

Simply plug the SonBlaster into any 110-115 V AC line, and flip the switch. In seconds, you'll clean 'most any mechanical, optical, electrical, medical or horological part or assembly you can think of. Perfect, too, for brightening, polishing, radioactive decontaminating, pickling, quenching and plating; emulsifying, mixing, sterilizing, impregnating, degassing, and other chemical process applications.

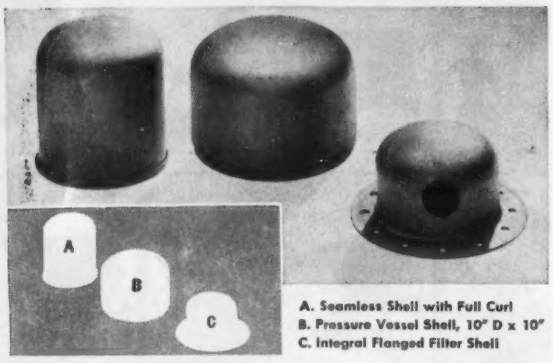
Mail the coupon for free help in determining the model that's best for you.

The SonBlaster catalog line of ultrasonic cleaning equipment ranges from 35 watts to 2.5 KW, and includes transducerized tanks as well as immersible transducers. If ultrasonics can be applied to help improve your process, Narda will recommend the finest, most dependable equipment available — and at the lowest price in the industry!

The Narda Ultrasonics Corporation
625 Main Street
Westbury, L. I., N. Y.
Department NED-6
Gentlemen:
Please send me more information about
☐ Series 1500 SonBlasters
☐ The complete Narda line
Name_____
Organization_____
Address_____
City_____
Zone____ State____

the narda ultrasonics corporation
625 MAIN STREET, WESTBURY, L. I., N. Y.
Subsidiary of The Narda Microwave Corporation

▲ For more details circle NED-737 A on enclosed inquiry slip ▲



A. Seamless Shell with Full Curl
B. Pressure Vessel Shell, 10" D x 10"
C. Integral Flanged Filter Shell

Eliminate excess weight . . . lower costs

Hackney shapes and shells are lightweight without sacrificing needed strength.

They may reduce over-all weight, save production time, lower unit costs and cut shipping expenses.

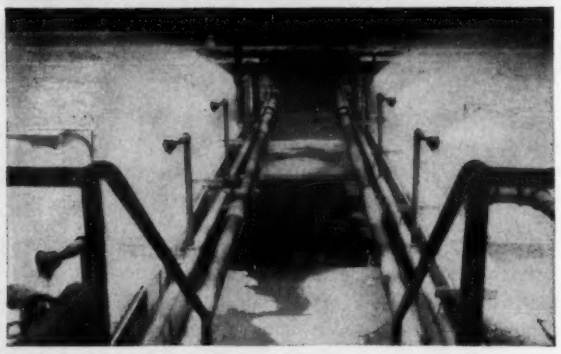
Available in *capacities* of 1 quart to 100 gallons—in cylindrical, spherical, tapered or conical shapes. *Diameters:* 3" to 32". *Depths* to 60"—some even longer. *Wall thickness:* for working pressures from 100 to 6000 psi. *Metals:* steel, nickel, magnesium, the new ultra-high-strength stainless steels, hot work tool steels, molybdenum and titanium.

Write for details.

Hackney MILWAUKEE **Pressed Steel Tank Company**
Manufacturer of Hackney Products
1450 South 66th Street, Milwaukee 14, Wisconsin
Branch offices in principal cities

CONTAINERS AND PRESSURE VESSELS FOR GASES, LIQUIDS AND SOLIDS

▲ For more details circle NED-738 A on enclosed inquiry slip ▲



High protection against low flash-point fires!

This Rockwood FogFOAM system guards the oil separator pits in the Cincinnati Gas & Electric Company's plant. During any critical temperature rise, detectors in the system sense the inception of fires. Rockwood FOAM liquid, mixed with water and air, is then instantly released through many FogFOAM heads, completely covering the threatened area with a thick blanket of FOAM — *and averting a dangerous fire.* For details on Rockwood fire-fighting products and systems write to ROCKWOOD SPRINKLER COMPANY, 567 Harlow St., Worcester 5, Mass.

ROCKWOOD SPRINKLER COMPANY
A Division of The Gamewell Company
Engineers Water . . . to Cut Fire Losses

▲ For more details circle NED-739 A on enclosed inquiry slip ▲

Here's the FAST, EASY WAY to LIFT heavy metal pieces...use the

- HANGS ON ANY HOIST
- HANDLES ANY SHAPE
- FASTER, STRONGER THAN ANY MUSCLE

The Dings MAGNA-HOIST is ideal for those back-breaking "odd" jobs around the shop. Dings Magna-Hoist is quicker than a hook sling, more flexible and more *available* than a lift truck . . . better, faster and stronger than any muscle.

It's low in cost, sturdily-built and will work for years with little maintenance . . . measures only 8" x 14" x 3".

Picture Magna-Hoist stacking stock and finished parts; loading and unloading trucks; lifting material on and off machine beds; *then write DINGS for full details.*

Dings **DINGS MAGNETIC SEPARATOR CO.**
4758 W. Electric Ave. • Milwaukee 46, Wisc.
MH139-1/9

▲ For more details circle NED-740 A on enclosed inquiry slip ▲

New Literature & Catalogs

Selecting Industrial Gloves

Pioneer Rubber Co.—"The Foolproof Industrial Glove Selector" is a slide-rule type of guide for users and buyers of gloves. A job condition check list gives quick evaluation of specific hand protection problems. This information is applied to keys on the selector chart. The right glove for any job is then indicated from a selection of 57 different industrial glove models.

▲ For more details circle NED-741 A on enclosed inquiry slip ▲

Vibration Inducers

Martin Engineering Co.—38-page catalog lists 52 sizes and types of Vibrolator vibration inducers ranging from a 4½-oz model to the 3000-lb impact car shaker. Pneumatic, electric, gasoline, hydraulic, and steam powered vibrators are covered. Engineering aid in applied vibration problems is offered.

▲ For more details circle NED-742 A on enclosed inquiry slip ▲

Electronic Wiring

Methode Mfg. Corp.—Offered as a "brainstorming" idea book, "The Systems Approach to Electronic Wiring and Connections" deals with the use of standard and flexible printed wiring, flat cable connectors, and associated components. Three sections deal with printed circuit and wiring device applications, design and specification of wiring components, and details of the Methode design, tooling, and manufacturing facilities.

▲ For more details circle NED-743 A on enclosed inquiry slip ▲

Butterfly Valves

Henry Pratt Co.—Design and engineering information on the new Monoflange Mark II rubber seat butterfly valve in sizes to 20 in. is presented in Bulletin 10. Flow data for various fluids are included. Valves give a tight shutoff at 150-psi differential across the closed disc and are suited for throttling service.

▲ For more details circle NED-744 A on enclosed inquiry slip ▲

Fianite for Pump Parts

Deming Co.—An insight into the chemical and physical properties of Fianite, a thermosetting, glass-reinforced polyester molding compound for pump parts, is furnished by the 12-page illustrated booklet, "Presenting a Great Performer." It is compared with other materials, including other thermosetting plastics. A table shows comparative strengths.

▲ For more details circle NED-745 A on enclosed inquiry slip ▲

Material Handling Equipment

Whiting Corp.—Whiting overhead traveling cranes, Trambeam monorail and crane systems, Pressuregrip vacuum handling systems, and the Trackmobile road and rail freight car moving equipment are described and illustrated in 16-page Bulletin 246.

▲ For more details circle NED-746 A on enclosed inquiry slip ▲

Clad, Precious & Other Metals

Texas Instruments Inc., Metals & Controls Div.—Solid and clad base metals, solid and clad precious metals, thermostat and industrial metals, and electrical contacts are available for a wide variety of applications. They are the subject of 12-page Bulletin GP-1A which discusses available forms and applications.

▲ For more details circle NED-747 A on enclosed inquiry slip ▲

Furnace Brazing Techniques

Electric Furnace Co.—Diagrams of typical assemblies are among content of Bulletin 592 on "Furnace Brazing Techniques." Advantages, design, materials, brazing medium, supporting fixtures, protective atmospheres, and temperatures are described. Section on "do's" and "don'ts" is included in its 16 pages.

▲ For more details circle NED-748 A on enclosed inquiry slip ▲

Magnetic Clutches & Their Uses

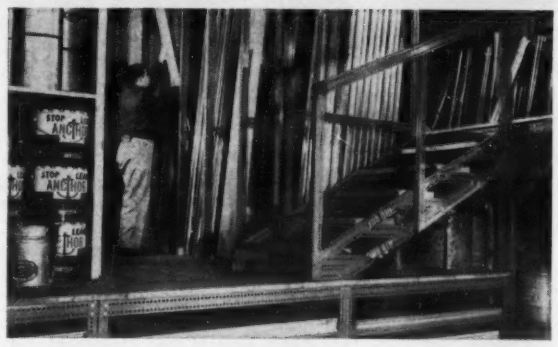
PIC Design Corp.—Design and applications, technical and testing specifications for magnetic clutches are detailed in an 18-page booklet which also covers their applications. Performance graphs, specifications, and diagrams of available units are included.

▲ For more details circle NED-749 A on enclosed inquiry slip ▲

Magnetic Solenoid Valves

Magnatrol Valve Co.—Normally-closed and normally-open electrically controlled magnetic solenoid valves comprise the line of controls detailed in illustrated 20-page catalog. They control water, oil, steam, air, solvents, gases, and chemicals. Specifications are in chart form.

▲ For more details circle NED-750 A on enclosed inquiry slip ▲



Republic METAL LUMBER
solves on-the-job framing problems

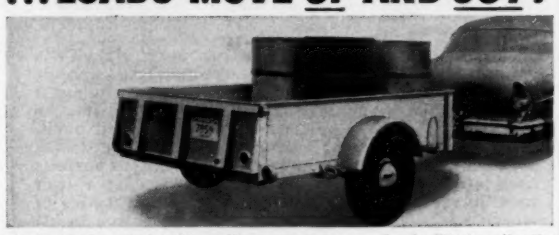
Fast, economical, easy-to-use Republic METAL LUMBER® solves even complicated framing problems. Use like common lumber—simply measure, cut, and assemble with standard bolt and nut fasteners. Ideal for erecting storage racks, work benches, catwalks, ramps, ladders, and other framing assemblies tailored to your particular needs.

Delivered in bundles of 10 pieces in 10-foot or 12-foot lengths with fasteners. Send for catalog.

REPUBLIC STEEL
BERGER DIVISION
1034 Belden Ave. • Canton 5, Ohio

▲ For more details circle NED-751 A on enclosed inquiry slip ▲

...LOADS MOVE UP AND OUT!



Trailevator puts load handling on a *one-man* basis. Hydraulically lowers to ground level for easy loading . . . then lifts *its own load* to hauling position! Hitches to car, truck or tractor—lowers and lifts without uncoupling. Now used by hundreds of leading companies and institutions. Team up *your* men with Trailevators . . . the *new* way to cut load hauling costs!

WRITE FOR ILLUSTRATED BROCHURE—Trailevator Division
Magline Inc., P.O. Box 11, Pinconning, Michigan

TRAILEVATOR
TAKES THE LIFT OUT OF LOADING

▲ For more details circle NED-752 A on enclosed inquiry slip ▲

HUOT **DRILL DISPENSER!**

KEEPS THE RIGHT DRILL READY!
(No "jungle of drills" to hunt through)

- Holds dozens of drills
- Compact 7x7x14 size
- Heavy duty drawers
- Positive drawer stops

WITH BUILT-IN INVENTORY

The built-in pricing or inventory system eliminates the need for troublesome record sheets. And you won't "run out" of drills either—you can see your complete stock at a glance!

Raised letters and numbers on drawer fronts are easy to read and will not rub off. Your dispenser comes in a choice of three models for numbered, lettered or fractional drills. May be stacked for compactness. Handsome gray hammerlin finish.

Write for Bulletin

HUOT **HUOT MANUFACTURING CO.**
571 No. Wheeler St. • St. Paul W4, Minnesota

▲ For more details circle NED-753 A on enclosed inquiry slip ▲

STOP FIRES FROM CARELESS SMOKING WITH SIPCO DUNKING STATIONS

Canister extends only 5½" from mounting surface.

Thousands of businesses, Industries and Institutions have discovered that SIPCO DUNKING STATIONS not only eliminate fire hazards from smoking, but also prevent litter, thus greatly reducing cleanup time.

Heavy duty cast aluminum canisters guaranteed 3 years against breakage. Over 20 different models. Standard and Jumbo sizes. Wall models, Floor models and permanent mounting models. Grey crinkle or bright polished models. With or without message signs and decals. Special colors, signs or decals on special order.

SIPCO DUNKING STATIONS are designed to be partly filled with water. "Smokes" dropped in the large top hole are OUT FOR GOOD—NO SMOULDERING—NO ODORS—NO UNSANITARY CONDITIONS. Lift off the canister or lift out an innerliner, dump it and the cleaning job is done.

MODEL 4J: For permanent mounting on walls, posts, columns, etc., in public areas. Eliminates pilfering problem. Bright polished JUMBO canister furnished with glass-fiber innerliner.

MODEL 1JD: Jumbo size deluxe floor model. Heavy weighted base and eye catching sign. Height 38", Wt. 26 lb. Ideal for halls, aisles, landings, etc.

MODEL M: New MIDGET SAFE SMOKER designed for use in telephone booths, elevators, toilet stalls, on benches, chairs, work tables or any location where a small "individual type" smoker is needed. Cast aluminum canister; coil spring across hinged lid safely "parks" unfinished "smokes". Available in grey crinkle or DELUXE bright polished finishes.

Model 1JD

Model 4J

MODEL M

WRITE FOR ILLUSTRATED BROCHURES

STANDARD INDUSTRIAL PRODUCTS CO.
• DEPT. D • 3527 FARMINGTON RD. • PEORIA, ILLINOIS

▲ For more details circle NED-754 A on enclosed inquiry slip ▲

Available NOW

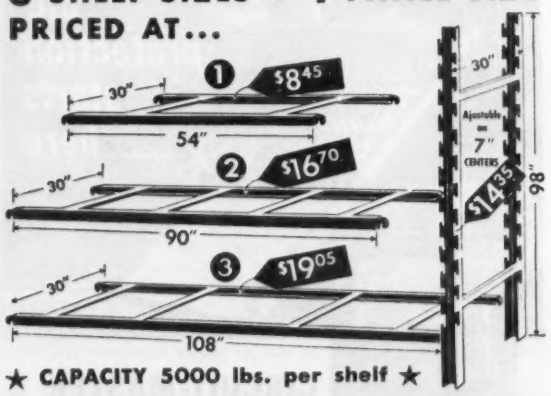
DEPENDABLE P-S MATERIALS HANDLING EQUIPMENT

STANDARD SIZE PALMER-SHILE Adjustable STORAGE RACKS SERIES 60

Pat. App. For

JUST TWO STEPS—SET UP PANELS SNAP SHELVES IN POSITION

3 SHELF SIZES • 1 PANEL SIZE PRICED AT...



★ CAPACITY 5000 lbs. per shelf ★

IMMEDIATE DELIVERY FROM STOCK OF LOW COST P-S Standard Series 60 Racks are ideal where fast action is necessary to solve your storage problem. Built of sturdy steel channel they are capable of handling almost any kind of materials and merchandise on pallets, skids, boxes or barrels. Come in four pieces—A. Vertical PANEL 8½' high, 30" deep and 2½" wide with shelves adjustable to 7" centers. B. THREE DIFFERENT SHELF LENGTHS 4½', 7½' and 9' each 30" deep. No small parts, set entirely by hand, top shelf can be flush. Standard racks can be joined in multiple sections of the same shelving lengths, or any combination.

★ Can Be Built To Customer Specifications

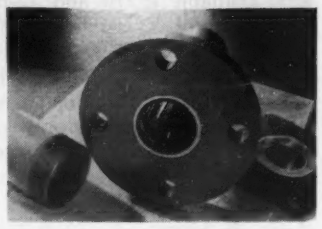
DESIGNED AND MANUFACTURED BY
Palmer-Shile Co.
16015 FULLERTON AVE., DETROIT 27, MICH.

Offices in Principal Cities
EXPORT OFFICE: 75 WEST STREET, NEW YORK 6, N. Y.

▲ For more details circle NED-755 A on enclosed inquiry slip ▲

New Processes & Materials

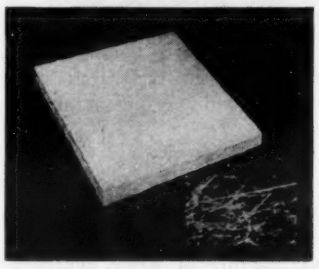
GLASS-LINED PIPE
can be field-cut to length



Applicable in highly corrosive service, Glasteel pipe rated at 150 psi is available in 1½, 2, and 3-in. diameters. The steel pipe has a ⅛-in. boro-silicate glass lining. It can be field-cut for fast installation and convenience in plant piping modifications and is supported in the same manner as ordinary steel or iron pipe. Installation is accomplished by cutting pipe to length, threading, fire-polishing the end, sanding it for a flat gasket seal, and installing the flange connection. Pipe is available in lengths up to 10 ft. • **Pfaudler Permutit Inc.**, Pfaudler Div., 1098 West Ave., Rochester 11, N. Y.

▲ For more details circle NED-756 A on enclosed inquiry slip ▲

THERMAL INSULATION
effective at up to 2200° F



Low density insulating blankets made of DuPont fibrous potassium titanate are offered in standard thicknesses from ¼ to 2 in. by 22 in. square. Average density is 16 lb per cu ft. Material exhibits low thermal conductivity at up to 2200° F, due mostly to a high refractive index of the crystalline fibers which block infrared radiation by diffuse reflectance. Inset photo shows magnified fibrous structure of the Resistotherm blanket. • **Resisto Chemical Inc.**, Wilmington, Del.

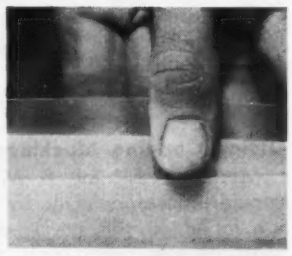
▲ For more details circle NED-757 A on enclosed inquiry slip ▲

MULTIPURPOSE CLEANER
for steam and ultrasonic cleaning

Safe on hands, painted surfaces, upholstery, and other easily damaged surfaces, Plaudit multipurpose liquid cleaning compound will remove heavy soils on hard-to-clean surfaces. It can be used in steam, emulsion, immersion, ultrasonic, and wipe-on cleaning. Mixed with from 5 to 50 parts of water, it cleans concrete floors, metal parts, air conditioning systems, yard equipment, aluminum equipment, and lighting fixtures. • **Turco Products, Inc.**, 24600 S. Main St., Wilmington, Calif.

▲ For more details circle NED-758 A on enclosed inquiry slip ▲

EXTRUDED NYLON FILM
made in various thicknesses



All of the chemical, physical, and mechanical properties of nylon are inherent in this extruded nylon film. Thicknesses from 0.002 to 0.060 in. and widths up to 18 in. are offered in unlimited lengths. It is grease, abrasion, and vapor resistant; has a low coefficient of friction and low permeability factor; and can be steam sterilized. Uses include thrust bearings, electrical insulators, oil bearing items, kick plates, and wrapping. • **United States Gasket Co.**, 654 N. Tenth St., Camden 1, N. J.

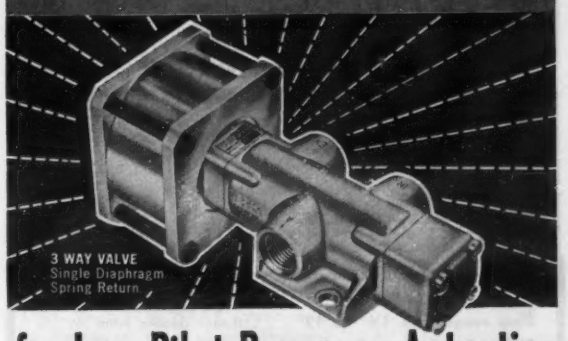
▲ For more details circle NED-759 A on enclosed inquiry slip ▲

SPLICING TAPE
for high voltage use

Butyl rubber base No. 30 high voltage splicing tape which fuses into a homogeneous, moistureproof mass has high tensile strength, good surface tack and fusion, good cold weather handling characteristics, and is stable in storage. It meets ASTM specification D-1373 for ozone and corona resistance. Maximum operating temperatures are 90° C up to 5 kv and 85° C up to 17 kv. Standard widths and special sizes are available. • **Bishop Mfg. Corp.**, 42 Canfield Rd., Cedar Grove, N. J.

▲ For more details circle NED-760 A on enclosed inquiry slip ▲

VERSA Diaphragm Actuated Valves



for Low Pilot Pressure Actuation

■ Versa Diaphragm Valves can be actuated by pilot (or signal) pressures as low as 5 PSI on double diaphragm types and as low as 10 PSI on standard spring return models.

Versa Diaphragm Valves are available with side port bodies or for manifold mounting, and in sizes from 1/8" thru 1" NPT in 2-, 3-, 4-, and 5-way types, and for pressures from partial vacuum to 500 PSIG.

All Versa Valves are triple pressure and functionally tested under water for guaranteed leakproofness.

VERSA
VERSA PRODUCTS COMPANY INC.
249-A SCHOLES STREET
BROOKLYN 6, N. Y.

■ Write Today for your free copy of bulletin 259

▲ For more details circle NED-761 A on enclosed inquiry slip ▲

For
• Handling "Hot" Materials
• Cleaning in Hazardous Areas
• Other "Problem" Tasks

SPENCER
"Special" Portable Vacuum Cleaners

Units available for all types of difficult or dangerous cleaning requirements. Typical of Spencer "specials" are cleaners

- Without electric motors or wiring—powered from existing compressed air lines.
- Equipped with "absolute" filters.
- Of abrasion-resistant construction.
- With centrifugal, liquid immersion or bag type separation.

Check Spencer today on your special needs in a vacuum cleaner.

REQUEST DESCRIPTIVE SHEET ON AIR JET CLEANERS, COMPRESSED AIR POWERED.

The SPENCER TURBINE COMPANY
HARTFORD 6, CONNECTICUT

▲ For more details circle NED-762 A on enclosed inquiry slip ▲

no more cold feet with Electro-Mat
ELECTRIC FLOOR MAT

helps prevent colds

Production line and office workers can now work in absolute comfort

The new low-priced ELECTRO MAT throws off a gentle warmth that keeps workers healthy, happy and comfortable. 14" x 21" portable foot warmer is safe and economical . . . consuming less power than a 100 Watt light bulb. It is made of high quality oil-resistant rubber.

Attention Employers

Increase the efficiency of your employees and help prevent colds which cause absenteeism. Equip each employee with an Electro Mat.

IMPORTANT SAVING: If 6 or more Electro Mats ordered price is only $6.95 each.
Please send me: ☐ Electro Mat at $7.95 each.
Enclosed is my check ☐ money order ☐
☐ C.O.D. I am enclosing $1.00. Will pay postman balance of $6.95 plus C.O.D. fee.

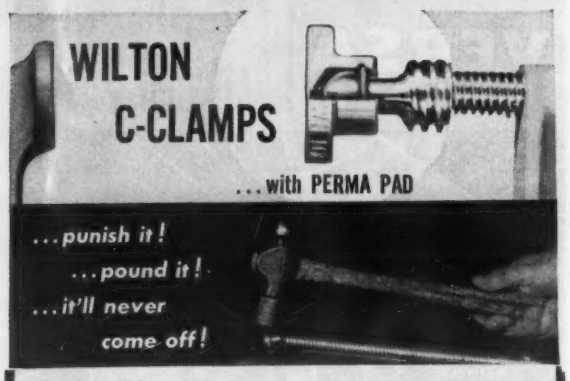
Name _____
Street _____ Zone _____
City _____ State _____

Mail check or money order today
Only $7.95 Delivered

10 Day Money Back Guarantee
Interstate Rubber Products Corp., Dept. 303
906 Avila St., Los Angeles 12, California
9108 Meyers Rd., Detroit 28, Michigan

Dealer Inquiries Invited.

▲ For more details circle NED-763 A on enclosed inquiry slip ▲



There's a Wilton C-Clamp to fit your customer's precise needs . . . 7 complete lines of light, regular and heavy duty models. Sizes range from 1½" to 12" . . . throat depths from -½" to 5¾". Rapid Titan (quick acting) and conventional actions. They *all* have PERMA-PAD swivels (guaranteed NEVER to come off) . . . . and individual boxing.

BOTH DUCTILE AND DROP FORGED STEEL

Send for Free 52 Page Catalog!

"Order Now From Your Stocking Industrial Distributor"

WILTON

WILTON TOOL MFG. CO., INC. Schiller Park, Illinois

Sold by leading distributors the world over! NED-10

▲ For more details circle NED-764 A on enclosed inquiry slip ▲

a free CaPlug assortment like this

will give you dozens of ideas for protecting products like these

JUST PUSH THEM IN . . . OR PUSH THEM ON
Tapered (non-threaded) CaPlugs can be used as caps or plugs, inside or outside of threaded or plain fittings. Made of tough, flexible Polyethylene, CaPlugs are unaffected by most chemicals, acids and solvents . . . will not collapse, chip, break or shred.

"KID GLOVE" PROTECTION WITH A DUAL PURPOSE
Here's how Resistoflex Corp. uses CaPlugs "to protect critical threads and machined surfaces and to keep the interiors of hose assemblies clean." Says Resistoflex, "CaPlugs prove most effective for both functions as well as being particularly easy to install."

COUNTLESS USES BY THOUSANDS OF USERS
Bell Aircraft Corp. applies both threaded and non-threaded CaPlugs to a wide variety of parts (such as these) in the manufacture of guided missiles, electronic components, rocket engines and servomechanisms. With numerous styles stocked in over 500 sizes, CaPlugs are readily available to answer practically every closure need.

MAKES A PRODUCT LOOK ITS "SUNDAY BEST"
On this Alemite Accumatic Valve, colorful red CaPlugs add snappy eye appeal and indicate care of manufacture. Says Stewart-Warner Corp., "CaPlugs help impress the customer with the steps that have been taken to protect the equipment and convince him of the continuing need for protecting lubricants against contamination."

MAIL THIS COUPON FOR FREE SAMPLES

CAPLUGS DIVISION
PROTECTIVE CLOSURES CO., INC.
2205-5 Elmwood Ave., Buffalo 23, N. Y

RUSH free assortment of CaPlugs, literature and prices to us.

NAME _____ TITLE _____
FIRM _____
ADDRESS _____
CITY _____ ZONE _____ STATE _____

▲ For more details circle NED-765 A on enclosed inquiry slip ▲

New Literature & Catalogs

Reversible Ratchet Wrenches

Lowell Wrench Co.—New ½-in. square drive socket sets, available in 10 and 12-point sizes, are included in the line of reversible ratchet wrenches shown in illustrated Catalog 62. Simplified method for figuring correct wrench size for any bolt or nut diameter is included. Strap and hopper car wrenches and Swaco railroad car movers also are covered.

▲ For more details circle NED-766 A on enclosed inquiry slip ▲

Ferrous Metallurgy Guide

Tempil Corp.—First published as a wall chart, the full-color "Basic Guide to Ferrous Metallurgy" is now offered in an 8½ x 11-in. notebook size. Principal characteristics of steel with carbon content to 0.9 per cent are represented across a temperature range to 2900° F. The important working temperature zones are shown, and 24 common metallurgical terms are defined. Reverse side shows available temperature ratings for Tempilstiks, Tempilaq, and Tempil pellets.

▲ For more details circle NED-767 A on enclosed inquiry slip ▲

Soldering Irons

General Electric Co.—"Save While You Solder" is title of 8-page illustrated Bulletin GED-3553 which outlines features of G-E soldering irons. Case histories of savings obtained by using the lightweight irons with calorized and ironclad tips and tubular heater are included.

▲ For more details circle NED-768 A on enclosed inquiry slip ▲

Multipurpose Slings

American Mfg. Co.—Nylon, dacron, or polypropylene are used in the manufacture of Amco synthetic webbing slings, offered in five styles with three types of hardware for various uses. Charts list widths from 1 to 10 in., plus thicknesses, breaking strengths, and safe working loads.

▲ For more details circle NED-769 A on enclosed inquiry slip ▲

Two-Part Compound Mixers

Pyles Industries, Inc.—Model SP1558 portable automatic "shot" meter-mixer for two-part compounds and adhesives is illustrated in descriptive Bulletin 101. Features of the highly accurate displacement metering system are explained. Air-powered 1600 Series automatic metering, mixing, and dispensing equipment for continuous operation with large volumes of viscous compounds is subject of Bulletin 102.

▲ For more details circle NED-770 A on enclosed inquiry slip ▲

Abrasive Blast Cleaning Machines

Both open and closed top, pressure type, sandblast machines, as well as their accessories, are described and illustrated in Catalog 594. Tables give ratios of nozzle bore sizes to compressor capacities. The Sanstorm high velocity blast nozzle which multiplies the surface area coverage is also detailed. Request on company letterhead to Sanstorm Mfg. Co., Box 1173, Fresno, Calif.

▲ For more details circle NED-771 A on enclosed inquiry slip ▲

Office Copying Machines

Minnesota Mining & Mfg. Co.—Details on office copying machines made by 10 different manufacturers are found on this pocket-size slide chart comparator. Machine and paper costs, types of copying processes, number of copies per minute, number of processing steps, and details on nine other categories are presented.

▲ For more details circle NED-772 A on enclosed inquiry slip ▲

Marking, Dating & Coding Machines

Industrial Marking Equipment Co.—Machines that will imprint any message on virtually any kind of carton, package, box, can, bag, wrapper, or container and, in many cases, on the unwrapped product itself, are described in 8 pages of illustrated bulletin. Machines for specific applications are detailed. They are used for marking, dating, coding, and general imprinting.

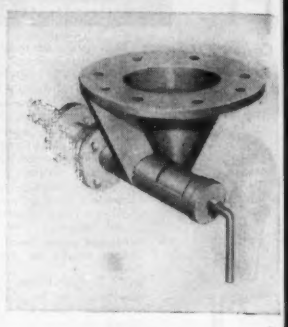
▲ For more details circle NED-773 A on enclosed inquiry slip ▲

Welded & Fitted Railings

Tubular Products, Inc.—Basic engineering data and standards for railing design are included in this catalog on welded and fitted railings for a wide variety of uses. A pictorial check of fittings provides immediate identity and fast selection for a particular application. Details for incorporation in drawings and specifications are furnished.

▲ For more details circle NED-774 A on enclosed inquiry slip ▲

NEW MATERIAL INTAKE VALVES INSURE SMOOTH FLOW OF MATERIALS IN PROCESSING INDUSTRIES

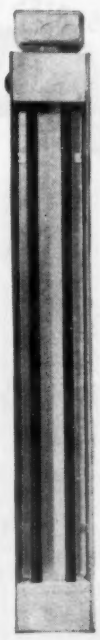


Material intake valves to insure the uninterrupted flow of materials through all types of high vacuum pneumatic systems are available for the first time from the U. S. Hoffman Machinery Corp. Suitable for use on 2 inch through 6 inch pipe lines, these material intake valves can be used for the removal or transport of any dry, free flowing, powdery or granular materials. Equipped with standard 8 inch flanged connections, they permit simple and rapid installation on bins, hoppers and dust collectors. Connected equipment is protected from exposure to the full suction of the vacuum system by a separate air inlet and material intake rate can be adjusted while air is flowing. The thorough mixing of air and material insures the smooth flow of materials.

For information on applications and installation in your plant write without cost or obligation to **U.S.Hoffman Machinery Corp., Air Appliance Division, Dept. EM, 103 Fourth Avenue, New York 3, N. Y.** *Advt.*

▲ For more details circle NED-775 A on enclosed inquiry slip ▲

NEW HEAT SOURCE



glass radiant heaters are up to 90% efficient

VYCOR® glass tubular heaters emit a kind of radiant energy—called "far infrared"—that is up to 90% efficient for heating, drying, curing or baking.

You get 9/10 kw of work done for every kw of input.

Up to 23 watts of energy per square inch of work surface.

Triple-reflector design focuses heat directly on your product.

Units come with all hardware—just wire and you're set to heat.

NEW BULLETIN on Corning radiant heaters. Complete specs and instructions on set-ups and operation. Write to Plant Equipment Sales Department, 56 Crystal Street, Corning, N. Y.

CORNING GLASS WORKS
CORNING MEANS RESEARCH IN GLASS

▲ For more details circle NED-776 A on enclosed inquiry slip ▲

CIRCUIT-MASTER

missing parts detector

detects non-ejection mis-feed • buckling end-of-material

Priced as low as **$271.75** complete!

Protect all your dies from damaging overloads for less than the replacement cost of one. Circuit-Master's patented electronic circuits automatically stop your machines BEFORE an unejected part can cause a die-damaging overload.
Simple to install, no changes to equipment or wiring required—Circuit-Master is completely automatic, no adjustments of any kind.
Write, wire, phone now for detailed bulletin NED-160.
U. S. and foreign patents pending

WINTRISS, INC.

Originators and manufacturers of Circuit-Master Overload Detector, Autotransfer, Automat, Automold and Missing Parts Detector.
20 Vandam Street • New York 13 • CHelsea 2-0105
Representatives: A few territories open on an exclusive, protected basis.

▲ For more details circle NED-777 A on enclosed inquiry slip ▲

"Helping Hands" for Hundreds of Jobs!

Clippard Minimatic miniature air devices

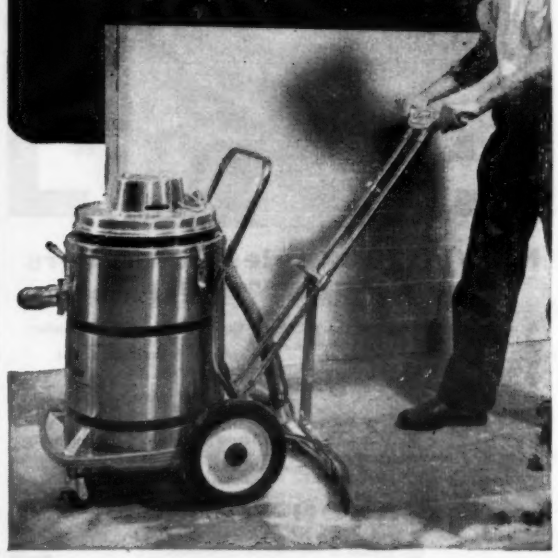
Small but rugged 3/8" and 9/16" bore AIR CYLINDERS, 2, 3, and 4-way AIR VALVES, MINIATURE NEEDLE, CHECK and FLOW CONTROL VALVES, valve operating SOLENOIDS, FITTINGS and ACCESSORIES save space, weight and money for you. Ideal for jigs, tooling and automation.

Write, NOW for Bulletin 8-59

Clippard INSTRUMENT LABORATORY, INC.
7390 Colerain Rd., Cincinnati 39, O. • Phone: JAckson 1-4261
Manufacturers of Miniature Pneumatic Devices, R.F. Coils, Electronic Equipment

▲ For more details circle NED-778 A on enclosed inquiry slip ▲

Fast, Big Volume Wet Pick-up From All Floors



Save labor, time. Do the job better, as well as quicker. Where the recovery of water, suds, any liquid from floors is the task, here's what to do.

1. If you are one of the thousands of plants that own a Super Suction Model BP-2 or Model RS-1 Suction Cleaner simply buy the new low priced Super Squee-Zee 30.

2. Purchase a Super Model BP-2 or RS-1 Cleaner and the Squee-Zee 30. These two great suction cleaners are used by all kinds of industries in many production and recovery operations, as well as for cleaning and blowing.

Either way you really get two units for the price of one—a Super cleaner and a big volume wet pick-up machine.

Super Squee-Zee 30 consists of a 30" neoprene rubber blade mounted in a metal frame, a suction chamber, 1½" hose, an adjustable handle and two metal plates by which the Squee-Zee 30 is attached to the transport handle of the cleaner.

The wide, capacious suction chamber gives faster, drier pick-up—takes up water as fast as the operator can walk.

The adjustable handle permits easy use by any operator. The rear mounting avoids wheel marks and permits the operator to use the pressure necessary for low places in the floor. The unit can be attached and detached without tools—hands only—in minutes. Write for catalog and data, or ask your local Super distributor.

THE NATIONAL SUPER SERVICE COMPANY
1958 N. 13TH STREET, TOLEDO 2, OHIO
In Canada: Plant Maintenance Equipment Co. Toronto, Montreal, Vancouver
SALES AND SERVICE IN PRINCIPAL CITIES

"Once Over Does It"
SUPER SUCTION SERVICE®
Power Suction Cleaners • Quality Floor Machines
SINCE 1911
"THE DRAFT HORSE OF POWER CLEANING MACHINES"

▲ For more details circle NED-779 A on enclosed inquiry slip ▲

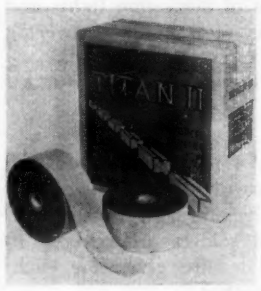
New Processes & Materials

WATERLESS HAND CLEANER cleanses hands in 40 sec

Over 500 hand cleanings can be obtained from a 2-lb can of Whisk waterless, industrial hand cleaner which removes grease, adhesives, carbon, paint, printer's ink, tar, and other soils. It leaves no oiliness or tackiness on the hands, permitting handling of paper immediately after use. Cleaner is packaged in 1 and 2-lb cans, plus a 2-lb dispenser which can be used in a foot-operated dispenser installed on a wall near the point of use. Dispenser is loaned free of charge to users of Whisk cleaner. • **Metalife Co.**, Whisk Products Div., Box 524, Wentzville, Mo.

▲ For more details circle NED-780 A on enclosed inquiry slip ▲

REINFORCED SEALING TAPE has specially formulated adhesive



Three-directional reinforced Titan II sealing tape features Hyde-X adhesive which is specifically formulated for reinforced tape and thus eliminates problems encountered in the use of asphaltic closures. Tape employs a 35-lb kraft and exceeds requirements of Rule 41 for two-strip case sealing. Fresh-Pak production scheduling assures manufacture and shipment of tape within the week order is received. • **Hudson Pulp & Paper Corp.**, 477 Madison Ave., New York 22, N. Y.

▲ For more details circle NED-781 A on enclosed inquiry slip ▲

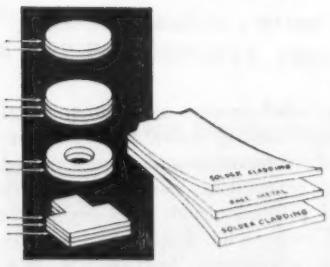
BELT DRESSING dispensed from spray can

Belt wear can be extended economically by application of Crown leather belt dressing. It is easily dispensed from aerosol spray can with a minimum of waste in application. Price is $1.50 per can. • **Page Belting Co.**, Concord, N. H.

▲ For more details circle NED-782 A on enclosed inquiry slip ▲

SOLDER-CLAD BASE METALS facilitate automatic joining

Nickel, Kovar, molybdenum steel, and other strip metals are now available clad on one or both sides with tin-lead solders, silver, gold, or related alloys.



Strip is stamped into discs, washers, and special shapes for use in automatic joining operations. They are also used as heat sinks, base rings or tabs, diaphragms, and contacts for special electronic uses. Purity and dimensional tolerances can be dictated by application. • **Alloys Unlimited, Inc.**, 21-01 43rd Ave., Long Island City 1, N. Y.

▲ For more details circle NED-783 A on enclosed inquiry slip ▲

STAINLESS SPRING WIRE has elasticity of music wire

Corrosion resistance is combined with elasticity approaching that of music wire in flat-form 17-7PH stainless steel spring wire. Typical uses include hair clip springs, electrical timer springs, and sprinkler assembly clips. Wire is furnished in one-fourth, one-half, three-fourths, or full-hard annealed conditions in bright or copper finish. Widths up to 0.300 in. are available. Minimum thickness is 0.009 in. • **National Standard Co.**, Niles, Mich.

▲ For more details circle NED-784 A on enclosed inquiry slip ▲

CHEM-WEAR® Permanently FLAMEPROOFED Work Clothes Protect from Fire Hazards

CHEM-WEAR Flameproofed work clothes protect workers from the hazards of welding, test cell work, light metal splashes.

Look to CHEM-WEAR, your best source for all types of acid-resistant clothes and a complete line of cotton work clothes.

Special Work Clothes for Handling Liquid Oxygen

Write for Catalog

Available from Your Safety Dealer or Write to

M. SETLOW & SON, Inc.
Quality Since 1896
131 CHESTNUT ST., NEW HAVEN, CONN.

▲ For more details circle NED-785 A on enclosed inquiry slip ▲

One Hoffman Bit Drills Up to 15,000 Godet Wheels With No Downtime

Up to 15,000 Godet Wheels drilled with center hole tolerance 1.5 min. to 1.53 max.—with one Hoffman Laboratory Bit. Actual production figures that are being duplicated by many Hoffman Bit users for precision drilling of glass, ceramics, quartz, etc. Diamond impregnated or oriented surface set.

Write for Illustrated Literature and Prices—FREE

HOFFMAN BROS. DRILLING CO.
SINCE 1902
106 Cedar Street PUNXSUTAWNEY, PENNA.

▲ For more details circle NED-786 A on enclosed inquiry slip ▲

PAYS FOR ITSELF . . .
CONTROLLED HUMIDITY
WITH LOW-COST WATER OR STEAM

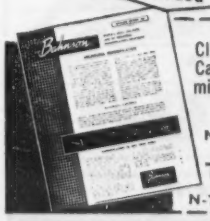
Bahnson UNIT HUMIDIFIERS

Guaranteed Units Insure Quality, Reduce Storage and Production Problems

Full line includes 14 units in various sizes, capacities for your needs, any size area. Units have low first cost, low operating cost, automatic controls. Easy to install from ceilings or on walls.

TYPE E

FREE ILLUSTRATED CATALOG



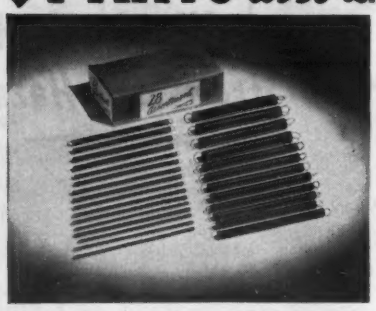
Clip Coupon to Letterhead and Mail Today! Catalog details complete line of 14 humidifiers for your needs, any size area.

NAME _____

THE BAHNSON COMPANY
N-7 WINSTON-SALEM, N. C.

▲ For more details circle NED-787 A on enclosed inquiry slip ▲

Stock SPRING assortments



Our #28 (extension) Spring Assortment folders are now available and yours for the asking. Our #31 (compression) Spring Assortment folders are also available. Ideal for tool rooms and maintenance work.
To overcome the faults of ordinary assortments, which seem to contain "every spring except the one needed", design efforts were not confined to the springs alone; rather, loadings and dimensions were analyzed to assure the user of greater probability in having the correct spring on hand, whatever the application.

Find Your Nearest Paragon Agent In The Yellow Pages

We also manufacture to special order.

Send samples or prints for quotation.

PARAGON SPRING COMPANY
4619 W. Fulton St. • Chicago 44, Ill.

▲ For more details circle NED-788 A on enclosed inquiry slip ▲

EISLER

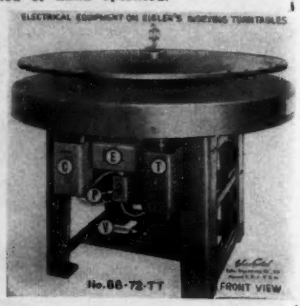
FOR 39 YEARS

We supply any part or complete equipment . . . Special turntables made to order

INDEXING TURNTABLES
MORE THAN 100 DIFFERENT TYPES

- FOR WELDING • BRAZING • SOLDERING • SPRAYING
- GLASS INSULATOR MELTING AND GLASS GLAZING with rotating stations and indexing with barrel cam or Geneva gear action.
- For work transferring, tilting positions. . Motorized or hand operated.

Eisler Indexing Turntables are completely electrically controlled



AND CAMS MADE TO YOUR SPECS!

"Ask for catalog 88-57"

EISLER ENGINEERING CO., INC.
740 SO. 13th ST., NEWARK 3, N. J
Charles Eisler, Jr., President

▲ For more details circle NED-789 A on enclosed inquiry slip ▲

FREE MARKAL PAINTSTIK!

We will send you without cost or obligation a MARKAL PAINTSTIK. They are available in various types suitable for marking on any kind of material. Hot surfaces up to 2100°F, also welding and heat treating. Cold surfaces down to —50°F, wet, dry, icy, oily, rough, smooth, acid or alkali. ***MARKS Are Permanent, Fadeproof, Weatherproof.*** Specify surface condition, material, temperature at time of marking.

Cold . . . down to —50°F.

Hot . . . up to 2100°F.

USE THIS COUPON OR WRITE ON YOUR LETTERHEAD!

Here's what I want to mark: _____

_____

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Marking Temperature _____ Max. Temp. _____ °F.

Name _____

Company _____

Address _____

City _____ Zone _____ State _____

My Distributor's Name _____

MARKAL COMPANY
3053 West Carroll Avenue • Chicago 12, Illinois

▲ For more details circle NED-790 A on enclosed inquiry slip ▲

New Literature & Catalogs

Snap-Acting Thermal Elements

Texas Instruments Inc., Metals & Controls Div.—"The Story of the Spencer Disc" is a 29-page booklet describing the origin and operation of the snap-acting disc type thermal element. It details how it actuates Klixon thermostats, circuit breakers, and inherent overheat motor protectors.

▲ For more details circle NED-791 A on enclosed inquiry slip ▲

Tubular Rivets

Townsend Co., Engineered Fasteners Div.—Quick, on-the-job help in selecting the right rivets for certain jobs is provided by a slide chart which has specifications for three basic tubular rivets. Truss, oval, and countersunk head types are covered in 20 sizes.

▲ For more details circle NED-792 A on enclosed inquiry slip ▲

Inspection Light & View Ports

R. H. Wager Co.—Excellent visibility in observing chemical reactions, combustion, and other operations within equipment such as ovens, dryers, and dehydrators is provided by a series of inspection lights and view ports. They are subject of a bulletin covering 4 and 6-in. sizes. Design features are presented.

▲ For more details circle NED-793 A on enclosed inquiry slip ▲

Soldering Supplies

Johnson Mfg. Co.—General purpose, stainless steel, aluminum, rosin, and noncorrosive fluxes, paste solders, tinning compounds, silver brazing fluxes, and aluminum and stainless steel solders are covered in Catalog C-1. Application data are given for each. Soldering blowpipe is also described.

▲ For more details circle NED-794 A on enclosed inquiry slip ▲

Infrared Heating

Bettcher Mfg. Corp.—"Application of Gas-Fired Infrared Heating" is the title and subject of a 16-page booklet describing this type of heating. Twenty charts and tables are included, as are formulas and equations for calculating requirements for industrial and commercial comfort heating.

▲ For more details circle NED-795 A on enclosed inquiry slip ▲

Conveyors

Jorgensen Conveyors, Inc.—Standard and special conveyors for a wide variety of applications are illustrated and their design is described in the bulletin, "Creative Engineering Dares to Challenge Tradition." Special applications and standard conveyors for conveying parts, chips, and components are shown.

▲ For more details circle NED-796 A on enclosed inquiry slip ▲

Steel Analyses Guide

Jones & Laughlin Corp., Stainless & Strip Div.—Forty stainless steels, 184 alloy steels, and 105 carbon steels most often used in industry are listed in 20-page "Pocket Guide to Steel Analyses." Federal specifications are shown with corresponding SAE, AISI, and AMS numbers.

▲ For more details circle NED-797 A on enclosed inquiry slip ▲

Receptacles & Plugs

Methode Mfg. Corp.—Schematics and dimensional data provided in 8-page catalog cover Reli-Acon receptacles, plugs, paired receptacles and plugs, paired plugs with shell, card receptacles, card plugs, Plyo-Duct cable plugs, and printed circuit card receptacle locking devices. Card receptacles and sockets are designed for switch gear, computers, instruments, telephone panels, airborne equipment, guidance systems, and telemetering equipment.

▲ For more details circle NED-798 A on enclosed inquiry slip ▲

Paste & Ribbon Mixers

Paul O. Abbe, Inc.—Mass & paste mixers described in 12-page Catalog D thoroughly mix and knead all types of paste, plastic, and similar products. Mixing capacities range from 0.25 to 300 gal. Ribbon mixers, also covered, blend a wide range of dry powders, liquids, and slurries. They handle volumes from 0.1 to 186 cu ft, or 0.6 to 1400 gal.

▲ For more details circle NED-799 A on enclosed inquiry slip ▲

Plate Heat Exchangers

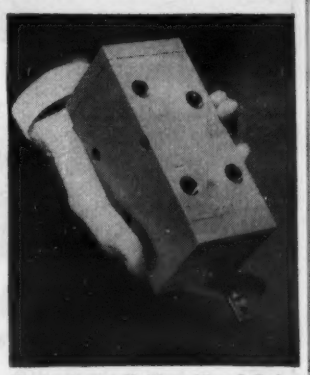
De Laval Separator Co.—Plate heat exchangers reviewed in 12-page brochure are used in labs and in small, medium size, and high capacity plants. Four-page fold-out diagrams the flow of the H.T.S.T. Pasteurizer. Actual installations are shown.

▲ For more details circle NED-800 A on enclosed inquiry slip ▲

Typical Control Functions solved by AIR CIRCUITRY

The Westinghouse Air Brake Company's complete line of Air CIRCUITRY components contains a wide variety of pneumatic positioners to handle almost all of your force and positioning requirements.

No longer is pneumatic positioning limited to a single or double acting cylinder. Remotely controlled by directional and/or pressure control valves, both variable and fixed force and positioning is possible. Along with all the advantages of air, these devices are easily maintained and serviced. Uncomplicated and rugged, pneumatic positioners may be the answer to your control problems.



Westinghouse Multi-position Cylinder

Typical Applications—Westinghouse Pneumatic positioners have been used in almost every field of industry today. These positioners can:

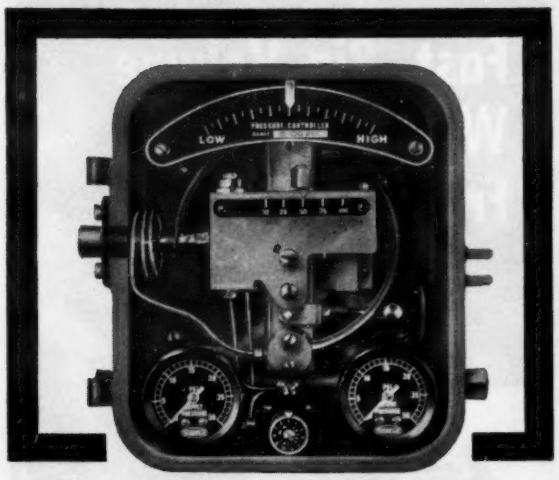
clamp	feed	broach	snub	raise	cushion	push
rotate	pierce	squeeze	form	press	stretch	blank
index	punch	shear	crimp	convey	brake	pull
hold	lock	lower	twist	bend	turn	eject

If you have a positioning problem, let us know about it. It can probably be solved with AIR CIRCUITRY. For more information, ask for our catalog on Positioners.

See the Yellow Pages under Cylinders for the Name of Your Local Distributor

WESTINGHOUSE AIR BRAKE COMPANY
INDUSTRIAL PRODUCTS DIVISION, WILMERDING, PENNSYLVANIA

▲ For more details circle NED-801 A on enclosed inquiry slip ▲



NEW! 2700 Series Controllers Now Available With Reset

A new adjustable reset unit widens the scope of application for these popular Masoneilan Pressure Controllers. The unit is also available in 3700 Series Temperature Controllers.

These regular features are retained:

- Simple control mechanism
- Adjustable proportional band
- Convenient set point reference
- Reversible action without extra parts
- Choice of valve, wall or panel mounting

These controllers are modestly priced and offer top value in reliable performance. Send for complete information.

MASON-NEILAN
69 Nahatan St., Norwood, Mass.
Division of Worthington Corporation

▲ For more details circle NED-802 A on enclosed inquiry slip ▲

TOOLS
JIGS
DIES
MACHINES

RUST-PROOFED IN SECONDS!

Immediate mail-order delivery of this clear, dry waxy film that positively seals moisture out. Clean, handy and effective as only Houghton can make it.

Price $15.24 per case (1 doz. 12 oz. cans) f.o.b. Philadelphia, Pa. Clip this advertisement to your letter or purchase order and mail to E. F. Houghton & Co., 303 W. Lehigh Ave., Philadelphia 33.

RUST-VETO SPRAY
. . . a product of
E F HOUGHTON & CO.
PHILADELPHIA · CHICAGO · DETROIT · SAN FRANCISCO

Ready to give you on-the-job service . . .

▲ For more details circle NED-803 A on enclosed inquiry slip ▲

NEED HEAT?

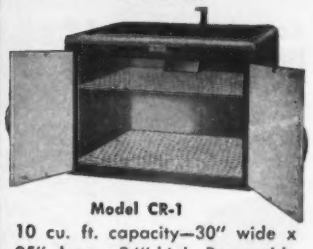
One of our 85 Standard Industrial Ovens will meet your needs.
BENCH • CABINET • WALK-IN TYPES.

For preparation of materials and chemicals for production.

On the production line for intermediate heating.

For baking-on finishes or drying.

GRIEVE-HENDRY OVENS



Model CR-1
10 cu. ft. capacity—30" wide x 25" deep x 24" high. Removable shelves and drip pan. Forced air circulation. Adjustable temperature control to 225° F. f.o.b. Chicago $121.50
Quick quotations, prompt delivery, reasonable prices on Ovens built to your requirements.

Write for literature
GRIEVE-HENDRY CO., INC.
1353 N. Elston Ave., Chicago 22, Ill.
For more details circle NED-804 A on enclosed inquiry slip

NEW! PROMACUT multi-purpose cut-off saw

CUTS *without* CLAMPING *or* COOLANT
Cuts carbon, stainless and alloy steels in seconds

Just place stock on table; Promacut whizzes through 2" x 2" x ½" mild steel angle in only 1 second; 6/10 second for ¾" round. Smooth, almost burr-free cuts with comparable speed in many shapes and sizes: up to 12" channel, 6" I-Beams, 4" angles. Does any job you're now doing with hacksaw, bandsaw, cut-off machine of equal capacity.

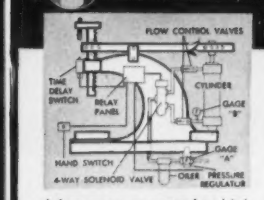
WRITE FOR DETAILS—Ask for Mobile Demonstration in Your Plant

PMI INC. PRODUCTION MACHINERY, INC.
P. O. Box 322, Dept. B
Oakton Station, Des Plaines, Illinois
BALTIMORE • CHICAGO
LOS ANGELES • HOUSTON

DEALERS: Some territories still open — write on letterhead
For more details circle NED-805 A on enclosed inquiry slip

PNEU-TROL

AUTOMATION TIME DELAY SWITCH
FOR CONTROLLED TIME DWELL OF AIR OR HYDRAULIC CYLINDERS



Arbor press converted to high production power press, using double end cylinder, Time Delay Switch, Flow Control Valves, and related equipment, Flow Valves permit independent ram speed adjustment in both directions. Differential pressure between "A" and "B" gages caused by throttling effect of Flow Control Valve creates time interval in working pressure build-up, which is compensated for by Time Delay Switch setting. This insures consistently accurate working pressure on the ram.

- Holds dwell accurately to fraction of second
- Automatically re-sets
- Designed for millions of actuations

Pneu-Trol Time Delay Switch will hold any cylinder controlled motion or operation at a positive stop on either end of the stroke for ¼ to 60 seconds in 20 to 1 ratios. Simple, easy to adjust. Automatically re-sets after each actuation. Positive, controlled time dwell permits wider use of air or hydraulic power in automatic operations, increases accuracy of work by insuring split-second accuracy of time dwell. Available with many thrust linkages for left and right, down, up, or horizontal thrust. Write for Special Bulletin TDS-59

AUTOMATION AUTO-PONENTS INC. COMPONENTS
2929 GRANT STREET
BELLWOOD (Chicago Suburb) ILLINOIS
For more details circle NED-806 A on enclosed inquiry slip

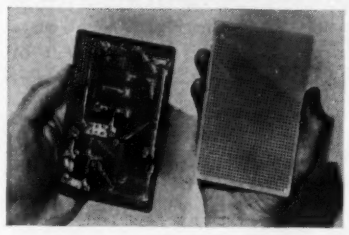
New Processes & Materials

SOLDERING FLUX
gives off no toxic fumes

Buffered to minimize corrosion, Fargail Soldering Cream is usable with phosphor bronze, tinned steel, galvanized iron, copper, brass, and other metals. It gives off no toxic fumes and is safely used under any conditions where soldering paste is indicated. Conductivity on electrical equipment is nil. Product can also be used for sweating copper fittings. Three ½-lb cans are currently offered for $3. • Farrelloy Co., 1246 N. 26th St., Philadelphia 21, Pa.

For more details circle NED-807 A on enclosed inquiry slip

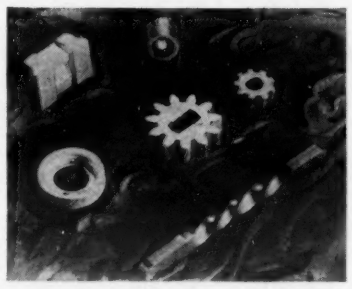
CERAMIC GRID BOARD
for prototype printed circuits



Prototype printed circuit layouts can easily be made with this Fotoceram grid board, a high-strength, temperature resistant, glass-ceramic grid clad on both sides with copper that can be etched away as desired. Grid is formed by 0.052-in. round holes spaced 1/10 in. apart. Boards are 1/16 in. thick and available in 3 x 5, 6 x 8, and 9 x 12-in. sizes. Components can be soldered to board more than 50 times without circuit run failure. • Corning Glass Works, Electronic Components Dept., Bradford, Pa.

For more details circle NED-808 A on enclosed inquiry slip

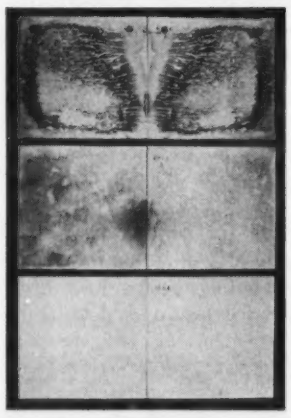
STAINLESS STEEL POWDER
for making gears, bushings, valves



Structural shapes which exceed 95 per cent of theoretical density can be produced from Staimet stainless steel powder. Parts fabricated from it by conventional pressing and sintering techniques have the same high corrosion resistance as cast and wrought stainless material. Fine particle size and uniform composition contribute to high density and low porosity, making it desirable for gears, bushings, and valves. Composition is similar to Type 316 or CF-Mo alloys. • Union Carbide Metals Co., 30 E. 42nd St., New York 17, N. Y.

For more details circle NED-809 A on enclosed inquiry slip

INTERLEAVING PAPER
prevents water staining and abrasion between aluminum sheets



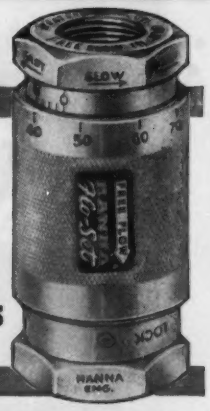
Water staining which mars the appearance of finished sheets of aluminum is inhibited by use of Alumitex interleaving paper, which also cushions it against vibration abrasion during shipment. "Contact" type paper must be placed in direct contact with the metal to be protected. It is offered in 20 and 35-lb weights in 24 and 48-in. widths, 100 yd to the roll. Bags, sheets, and die cut shapes can be ordered in sizes to suit application.

Illustration shows the results of high humidity storage of packed 3S-H14 aluminum sheets without interleaving (top), with untreated tissue (middle), and with Alumitex interleaving (bottom). Paper also offers protection for aluminized steel, galvanized steel, magnesium, and copper. • Orchard Paper Co., 3914 Union Blvd., St. Louis 15, Mo.

For more details circle NED-810 A on enclosed inquiry slip

The answer to precision speed control

HANNA Flo-Set Speed Control Valves



For precision control of cylinder speeds, Hanna offers a line of Flo-Set Valves ¼", ⅜", ½" and ¾". Micrometer graduations in hundredths of a revolution permit precision regulation of flow. Speeds of forward and reverse piston strokes may be independently controlled. For light piping and tubing, there's a ¼" Flo-Set Jr. Valve, without micrometer markings.

Hanna Flo-Set Valves are suitable for air, oil or water control, with maximum pressure to 250° p.s.i. and temperature to 250° F. They may be mounted in any position.

WRITE FOR FREE NEW BULLETIN 253A
It gives complete details and specifications on Hanna Flo-Set Valves.

Hanna Engineering Works
HYDRAULIC AND PNEUMATIC EQUIPMENT • CYLINDERS • VALVES • RIVETERS
1759 Elston Avenue • Chicago 22, Illinois
For more details circle NED-811 A on enclosed inquiry slip

EASY TO APPLY. PLIOBOND requires no mixing, brushes on, dries rapidly.

EXCELLENT ADHESION. PLIOBOND exhibits exceptional strength—up to 1600 lbs./sq. in. in shear tests.

EXTREMELY DURABLE. PLIOBOND resists age, heat, cold, water, chemicals, oils.

Pliobond BY GOODYEAR

Pliobond—T.M. The Goodyear Tire & Rubber Company, Akron, Ohio

For more details circle NED-812 A on enclosed inquiry slip

NEW FASTENER CATALOG

This is really an up-to-date handbook covering the Design and Purchasing of cold headed fasteners and small parts. Loaded with money saving 'Know-How'! Send for your copy of Catalog No. 106.

Hassall

MANUFACTURERS SINCE 1850

JOHN HASSALL, INC.

P. O. Box 2178, WESTBURY, LONG ISLAND, N. Y.

▲ For more details circle NED-813 A on enclosed inquiry slip ▲

Announcing... the latest addition to our family of quality products

MEYERCORD

DRI-MARK FILMS

DRI-MARK . . . is Meyercord's newly perfected, custom-processed line of PRESSURE SENSITIVE signs and trade marks developed specifically for the requirements of durable Truck Signs, Window Signs, Nameplates, and Product Markings for indoor and outdoor use on both light and heavy equipment. These startling new films include:

DRI-MARK DECAL ★ DRI-MARK VINYL ★ DRI-MARK OUTDOOR PAPER ★

DRI-MARK MIRRO-CAL ★ DRI-MARK MIRRO-CAL VINYL ★ DRI-MARK CLEAR MYLAR* ★

Chrome-bright mirrorized film (1 mil and 3 mil) — A mirrorized vinyl Mylar* laminate — *A DuPont polyester film (1 mil and 3 mil)

These high tensile strength PRESSURE SENSITIVE films and laminates give the greatest possible latitude and flexibility to the Meyercord line of products, adaptable to all of your sign needs.

DRI-MARK Decals are processed with Meyercord's own exclusive PRESSURE SENSITIVE adhesive—another development of the firm that for 64 years has maintained the world's undisputed leadership in development and production of Decal products.

Meyercord's in-plant Research, Art, Production and Service facilities assure the most careful processing and quality control.

Remember, when it's DRI-MARK it's MEYERCORD!

with MEYERCORD COLORGARD 70

New . . . all Meyercord DRI-MARK films are protected by COLORGARD 70 . . . Meyercord's exclusive laboratory-developed and perfected clear top coat—the toughest, most durable coat yet produced for the Decal and transferable film industry. Thoroughly tested! Two years in actual use!

Whatever your sign needs, you owe it to yourself to investigate Meyercord's complete line of products. Our factory trained representatives will be glad to assist you in the proper selection of markings for any particular requirement.

the MEYERCORD co.

Dept. A-316, 5323 West Lake Street, Chicago 44, Illinois

CHECK AND MAIL COUPON
. . . with company letterhead, please

THE MEYERCORD CO.
Dept. A-316, 5323 West Lake Street, Chicago 44, Illinois
We are interested in the following: (please check)
☐ Point-of-Sale signs ☐ Nameplates and product markings
☐ Truck signs and lettering ☐ (others)_____
Name_____
Firm Name_____
Address_____
City_____ Zone_____ State_____

▲ For more details circle NED-814 A on enclosed inquiry slip ▲

New Literature & Catalogs

Suspension Scale

W. C. Dillon & Co.—Engineering Bulletin 58E and a color card with dimensional and price data are descriptive of Model P dial type suspension scales. Scales are offered in pound ranges of 0-250 to 0-10,000 lb and kilogram capacities of 125 to 5000 kg. Accuracy is within 0.1 per cent.

▲ For more details circle NED-815 A on enclosed inquiry slip ▲

Adhesives, Coatings, Paints & Cleaners

Magic Chemical Co.—Useful to purchasing and procurement officials handling Government contracts, 24-page Catalog 75C lists 1000 U. S. Government specifications covering adhesives, sealants, paints, cleaners, coatings, and chemical compounds. Edition is divided into eight sections according to Federal Class Numbers and has a complete numerical index.

▲ For more details circle NED-816 A on enclosed inquiry slip ▲

Positive Belt Drives

Browning Mfg. Co.—The flexibility of belt drives is combined with the advantages of chain and gear drives in the Browning Gearbelt drive described in 56-page Catalog GB-201-A. It provides specs on hundreds of stocked Gearbelts and pulleys, along with installation suggestions, engineering data and tables of drive combinations. Belt teeth engage pulley grooves for positive power transmission.

▲ For more details circle NED-817 A on enclosed inquiry slip ▲

Processing Equipment Guide

Allis-Chalmers Mfg. Co.—32-page Catalog Guide 727-758 on equipment for the processing industries covers fluid flow; disintegration, mixing, and agglomeration; dry separation; liquid separation; heat transfer; materials handling; and water conditioning equipment. Electrical equipment for the complete process plant, electronic metal detectors, chemicals, and service are also reviewed.

▲ For more details circle NED-818 A on enclosed inquiry slip ▲

Roll Feeds for OBI Presses

F. J. Littell Machine Co.—Operating and economical advantages of single and double rack and pinion roll feeds for OBI presses are among subjects covered in 16-page Bulletin A-11. Feeds are shown in operation on various standard punch presses. They will triple the output of a stamping press, minimize waste, and prevent hand-feeding accidents.

▲ For more details circle NED-819 A on enclosed inquiry slip ▲

Flexible Couplings

Thomas Flexible Coupling Co.—48-page revised Catalog 60 on flexible couplings pictures various installations and includes diagrams and tables for each type. Misalignment is described, loads are classified, and customer is assisted in selection for specific requirements. New additions include a line of miniature couplings as well as tabular data on new large sizes.

▲ For more details circle NED-820 A on enclosed inquiry slip ▲

Frequency Meters

James G. Biddle Co.—Permanent accuracies within ±0.1 per cent are afforded by Frahm Precision resonant reed frequency meters described in 20-page Bulletin 32. Miniature, switchboard, and portable models are available in various ranges between 10 and 1700 cps, with signal voltages from millivolts upwards. Highlight of catalog is selection chart for units with 2½ to 9-in. case sizes.

▲ For more details circle NED-821 A on enclosed inquiry slip ▲

Metal Corrosion Prevention

Corrosion Reaction Consultants, Inc.—Liquid formula CRC-3-36 successfully prevents corrosion of iron, steel, aluminum, copper, brass, magnesium, and other common metals, whether bare, plated, or painted. An 8-page folder explains how product works, how it is applied, its duration of effectiveness, and details its physical specifications.

▲ For more details circle NED-822 A on enclosed inquiry slip ▲

Steam Trap Primer

Barnes & Jones, Inc.—"The B&J Steam Trap Primer" gives fundamental facts on condensate drainage and all types of steam traps. Company manufacturers a complete line of thermostatic steam traps rated up to 250 psi, ranging from ½ to 2 in. in bronze and semisteel, and ½ to ¾ in. in cast steel. Primer reviews steam trap fundamentals for maintenance engineers and foremen.

▲ For more details circle NED-823 A on enclosed inquiry slip ▲

☐ Reduce costs
☐ Simplify assembly
☐ Improve appearance with

GRC DIE CAST ZINC ALLOY & MOLDED NYLON FASTENERS

DIE CAST ZINC ALLOY: Wing Nuts, Cap Nuts, Thumb Nuts, Thumb & Wing Screws

MOLDED NYLON: Screws, Hex Nuts, Washers, Screw Insulators

Round Head THUMB NUTS

Open End

Closed End

GRC's exclusive wide grip; generous width tops have deep fluted edges for firm, comfortable grip, corrosion resistant rust-proof. Smart design for added sales appeal.

Head Diameters: ½" thru 1⅛"

Thread Sizes: #4 to 7/16"

- High in quality
- Uniformly accurate
- Low in cost
- Wide range of stock styles, types, sizes and threads

Produced in one high speed automatic operation, GRC's exclusive methods assure uniformity, smooth, rustproof & corrosion resistant surfaces and the lowest possible cost. New kinds of fasteners never before available . . . modifications in stock fasteners for specialized use . . . infinite variety in styles, types and sizes, have been made possible by GRC's special automatic die casting and molding machines.

Write, wire, phone RIGHT NOW for prices, your copy of GRC's NEW DETAILED FASTENER CATALOG

GRIES

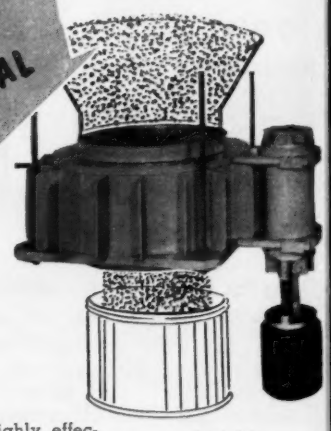
GRIES REPRODUCER CORP.

World's Foremost Producer of Small Die Castings

143 Beechwood Ave., New Rochelle, N.Y. ● NEw Rochelle 3-8600

▲ For more details circle NED-824 A on enclosed inquiry slip ▲

START HERE TO GET RID OF THE IRON IN DRY MATERIAL



FRANTZ

FERROFILTER®

MAGNETIC SEPARATOR

An extremely simple but highly effective method of extracting iron particles from powdered and granular materials that you manufacture, buy, sell, or use in processing. Made in two sizes with capacities from 1 to 25 tons per hour depending on the nature of the material. Other FERROFILTERS available for handling liquids and slurries.

Send for BULLETIN 56-1

S. G. FRANTZ CO., Inc.

561 Kline Ave. at Brunswick Pike

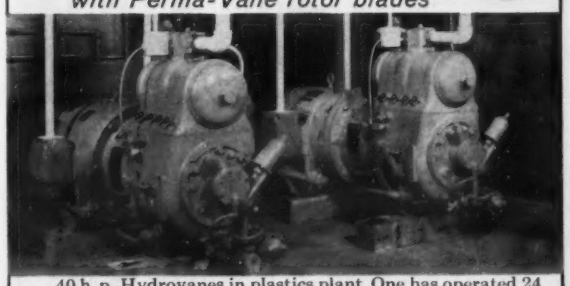
P. O. Box 1138 Trenton 6, N. J.

▲ For more details circle NED-825 A on enclosed inquiry slip ▲

today's best compressor investment

DAVEY HYDROVANE ROTARY

with Perma-Vane rotor blades



40 h. p. Hydrovanes in plastics plant. One has operated 24 hours a day for 2½ years. Other is now in its 6th month of trouble-free service.

The Davey Hydrovane Rotary meets needs of modern industrial production.

✓ Perma-Vane, patented long-life blades.
✓ Inexpensive to install . . . easy to move and maintain.
✓ Silent . . . vibrationless . . . compact.
✓ No compressor room . . . no foundation.

Complete line . . . 2 to 125 h.p.

Write for Bulletin E.

DAVEY pioneers of air-cooled air

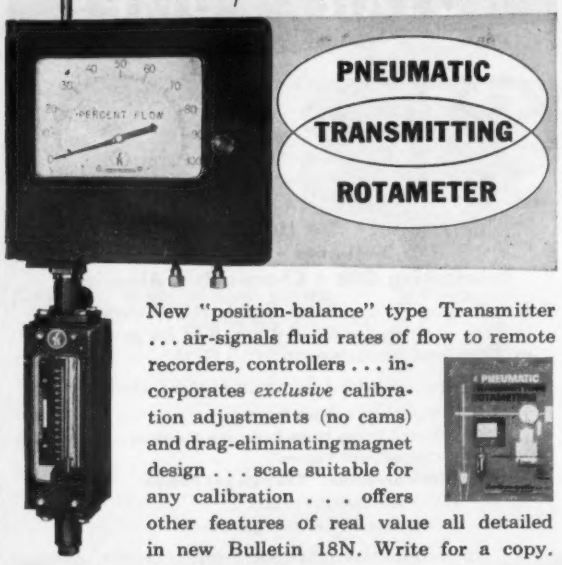
INDUSTRIAL DIVISION

DAVEY COMPRESSOR CO.

Kent, Ohio

▲ For more details circle NED-826 A on enclosed inquiry slip ▲

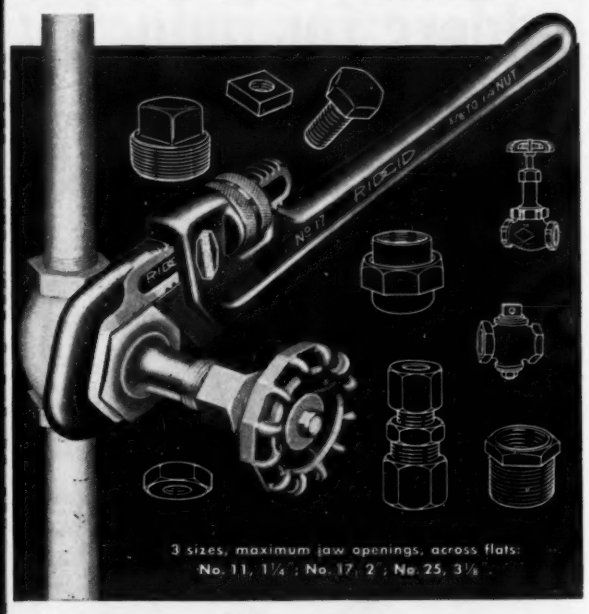
NEW/IMPROVED



New "position-balance" type Transmitter . . . air-signals fluid rates of flow to remote recorders, controllers . . . incorporates *exclusive* calibration adjustments (no cams) and drag-eliminating magnet design . . . scale suitable for any calibration . . . offers other features of real value all detailed in new Bulletin 18N. Write for a copy.

Schutte and Koerting COMPANY
INSTRUMENT DIVISION
2227 STATE ROAD, CORNWELLS HEIGHTS, BUCKS COUNTY, PA.

▲ For more details circle NED-827 A on enclosed inquiry slip ▲



Master of Every Nut and Bolt...

NEW RIDGID® Hex Wrench

Wide-open fast-action multi-sided grip on every hex, square and flathead!

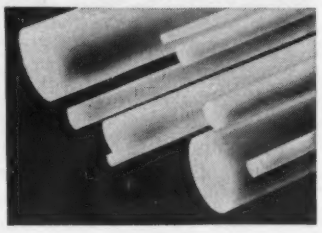
Quick adjustment—stays to size . . . this new Hex Wrench goes on easily, won't slip off—harder you pull, the tighter it grips . . . no more skinned knuckles or rounded nut shoulders! Narrow jaw for close quarters. Famous RIDGID heavy-duty design, guaranteed housing, comfort-grip handle. Three sizes for ⅜" to 2" nuts. Make your work easier and faster—buy new RIDGID Hex Wrenches at your Supply House!

THREADED PIPE . . . *It's Tight . . . It's Best . . . Costs Less!*

▲ For more details circle NED-828 A on enclosed inquiry slip ▲

New Processes & Materials

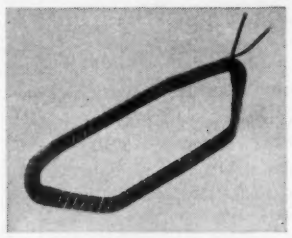
THERMOPLASTIC RODS
extruded in diameters up to 3 in.



High tensile strength, rigidity, fatigue life, and resistance to creep and solvents at both room and elevated temperatures are claimed for Delrin acetal resin, a Du Pont thermoplastic material. It is now available in up to 3-in. diameter extruded rods. Rods have a hard glossy surface with a low coefficient of friction, and possess good dimensional stability, electrical properties, and abrasion resistance. It is easily machined by sawing, milling, turning, drilling, threading, and tapping, and it can be blanked and punched. • **Garlock Packing Co.**, 441 Main St., Palmyra, N. Y.

▲ For more details circle NED-829 A on enclosed inquiry slip ▲

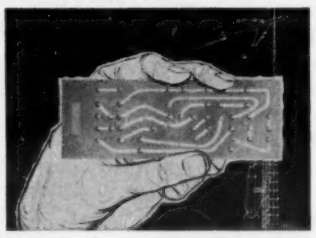
COIL INSULATING TAPE
guide line assures smooth build-up



Featuring excellent chemical, dielectric, and physical stability over a temperature range of −130 to 500° F, PSR-2800 triangular guide line tape is designed for insulating form-wound motor coils. Because of its triangular cross-sectional shape, it can be half-lapped around complex shaped coils and wires with a smooth, ridge-free, and void-free build-up. It bonds to itself under normal contact pressure, and bond strength improves with aging or post curing. • **Permacel**, New Brunswick, N. J.

▲ For more details circle NED-830 A on enclosed inquiry slip ▲

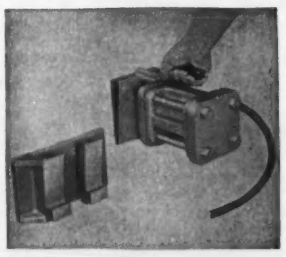
PRINTED CIRCUIT LAMINATE
in 1/32 to 5/16-in. thicknesses



Paper-base Farlite P-633-GS plastic laminate for printed circuits is a medium hot punching grade with minimum flatwise flexural strength of 16,000 psi and lengthwise tensile strength of 12,400 psi. Insulation resistance is 50,000 megohms at 35° C and 90 per cent relative humidity. Laminate will not blister or delaminate in solder floating operations. It is offered in 1/32 to 5/16-in. thicknesses. • **Farley & Loetscher Mfg. Co.**, Seventh & White Avenue, Dubuque, Iowa.

▲ For more details circle NED-831 A on enclosed inquiry slip ▲

CLEVELAND'S NEW PORTABLE VIBRATOR



Lightweight

Well-Balanced

Having trouble with materials sticking in your portable bins or trucks? If so the Cleveland Type LSRRH Portable Vibrator is just what you've been looking for. This lightweight, unusually well-balanced portable is ideal for all equipment such as concrete forms, septic tanks or large pipe forms, that do not require a permanent vibrator installation.

The Cleveland Type LSRRH Portable Vibrator will develop 7000 to 8000 vibrations per minute at maximum speed, maintaining a free flow under all conditions. Its sturdy cast steel bracket holds the LSRRH securely in place, making it ideal for heavy duty use.

For more detailed information write for our illustrated catalog.

Remember, this new portable vibrator is just one of The Cleveland Vibrator Company's complete line of air and electric vibrators. There's a type and size vibrator for your every requirement.

THE CLEVELAND VIBRATOR CO.

Dept. IK-2744 Clinton Avenue • Cleveland 13, Ohio

▲ For more details circle NED-832 A on enclosed inquiry slip ▲

Users tell the Speed-Patch story best with orders for more . . . year after year. Why not take advantage of the experience of others and make ready-mixed Speed Patch your standard floor repair. Sets immediately. Heavy loads truck over each patch without waiting.

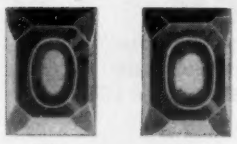
Write for Details

ROCK-TRED Corporation
Manufacturers of a Complete Line of Building Maintenance Materials
7440-7450 North St. Louis Avenue • Skokie, Illinois

▲ For more details circle NED-833 A on enclosed inquiry slip ▲

PANNIER STEEL STAMPS:

you won't buy them so OFTEN, but you'll always buy *PANNIER*



NEW — This stamp made good, clear impressions after 30,000 hammer blows!

OLD

Pannier Steel Figure and Letter Stamps are *intentionally* made for a long life of good, clear impressions. Try a set and see! Write for sizes and prices.

You can get the same high Pannier quality in special design stamps, inspectors' hammers and holders with changeable steel stamping type.

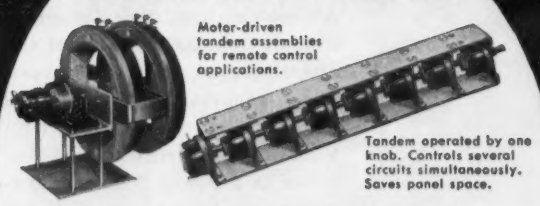
PANNIER MASTER MARKERS
301 PANNIER BLDG., PITTSBURGH 12, PA.

▲ For more details circle NED-834 A on enclosed inquiry slip ▲

OHMITE®

THE QUALITY LINE OF INDUSTRY-PREFERRED COMPONENTS

Rheostats for Difficult Control Problems



Shown above are two examples of special rheostat assemblies which Ohmite developed to solve tough control jobs. They were chosen from literally hundreds of solutions on file. All are built around the famous line of Ohmite rheostats—industry's most dependable, most complete selection. If you now have a problem, chances are it has already been solved. Why not contact Ohmite engineers and find out?

OHMITE Manufacturing Co.
3620 Howard St., Skokie, Illinois

RESISTORS RELAYS TAP SWITCHES
RHEOSTATS TANTALUM CAPACITORS
R. F. CHOKES VARIABLE TRANSFORMERS DIODES

▲ For more details circle NED-835 A on enclosed inquiry slip ▲

The Only Complete, Comprehensive STOCK LINE of MULTI-USE, SOFT RUBBER BONDED ABRASIVES!

Broad, New Time-Saving Applications Never Before Associated with Abrasive Uses

Brightboy's unique rubber-and-abrasive working action offers exceptional time-saving, product-improving opportunities. Replaces older, costlier methods. BURRS, CLEANS, FINISHES, POLISHES, *frequently in one operation.* Wheels, Sticks, Rods and Blocks in grades and textures JOB-MATCHED to your machine and manual operations.

Order from your distributor's stock, backed up by our complete factory stock. FAST DELIVERIES.

WRITE NOW for:

- Illuminating Details
- Work & Applications Data
- Free Sample Hand Piece

WELDON ROBERTS Brightboy RUBBER CUSHIONED ABRASIVES

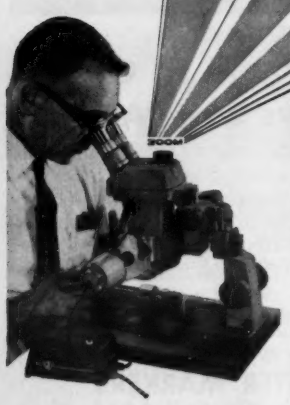
BRIGHTBOY INDUSTRIAL DIVISION
WELDON ROBERTS RUBBER CO.
95 North 13th Street
Newark 7, N. J.

America's Pioneer Manufacturer of Rubber-Bonded Abrasives.

▲ For more details circle NED-836 A on enclosed inquiry slip ▲

Selling FASTER than any microscope in history!

ZOOM



NEW STEREOZOOM* MICROSCOPES BY BAUSCH & LOMB!

Breaking all sales records! Just try one in a free shop demonstration and you'll soon see why . . . they're the newest step forward to faster and easier 3D work.

EXCLUSIVE NEW OPTICS!

Get StereoZoom . . . continuously variable power! Just a turn of the knob gives an infinite choice of magnifications throughout the whole stereo range . . . to 120× on some models.

EXCLUSIVE NEW POWER POD DESIGN!

A wholly enclosed optical system in a single unit. Keeps out dust and dirt; eliminates old fashioned nosepieces, annoying image jump and blackout. NEW VERSATILITY, TOO! Your choice of StereoZoom or fixed power in a Power Pod that interchanges among any of the five basic microscope stands.

NEW LOW PRICE! About ⅓ lower than previous line.

*Trademark, Bausch & Lomb Optical Co.

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BAUSCH & LOMB OPTICAL CO.
72701 Bausch St., Rochester 2, N. Y.

☐ Send me new B&L StereoZoom Microscope Catalog D-15.
☐ Schedule a demonstration at my convenience.

Name, Title.....
Company.....
Address.....
City..... *Zone*..... *State*.....

▲ For more details circle NED-837 A on enclosed inquiry slip ▲

New Literature & Catalogs

Electrical Controls Reference

The 156 fact-filled pages on electrical distribution and control equipment which comprise this "Redi-Reference" provide tabulated electrical data and prices, in addition to pertinent design information. Among items catalogued are circuit breaker load centers, fusible service equipment, safety switches, fuses, molded case and industrial circuit breakers, distribution panelboards, bus duct, motor controls and drum switches, starters, pushbutton stations, control centers, enclosed switchgear, and power switches. Write on letterhead to Federal Pacific Electric Co., 50 Paris St., Newark 1, N. J.

▲ For more details circle NED-838 A on enclosed inquiry slip ▲

Plastic Decals

Goodren Products Corp.—Goodstix pressure-sensitive decals are individually designed and reverse printed on clear plastic. Units may be die cut to any shape and are available individually, in continuous rolls, in strips, or sheets of preseparated labels. Decals are described in 6-page file folder which contains representative samples.

▲ For more details circle NED-839 A on enclosed inquiry slip ▲

Pyrometer Indicators

Atlantic Pyrometers, Inc.—Data Bulletins 0031 and 0032 of 2 pages each report operating features, applications, standard ranges, and specifications of Z21 and Z23 pyrometer indicators. They are supplied for the full span of temperatures from −300 to 3000° F and are accurate to ±1 per cent of scale.

▲ For more details circle NED-840 A on enclosed inquiry slip ▲

High Pressure Seals & Fasteners

A.P.M. Corp.—Tabular data, military and commercial specifications, and descriptive text are provided in 16-page general Catalog 359A on self-sealing fasteners, switch and shaft seals, and armored blade power connectors. These products enable plants to seal their equipment without any rebuilding or redesigning.

▲ For more details circle NED-841 A on enclosed inquiry slip ▲

Wet Magnetic Particle Inspection

Harry Miller Corp.—36-page booklet describes wet magnetic particle inspection using Immunol 438 in water as the vehicle instead of kerosine or solvents. Advantages pointed up in booklet include better definition of flaw, cost reduction, and elimination of fire hazard, skin infection, and inhalation hazards.

▲ For more details circle NED-842 A on enclosed inquiry slip ▲

Welding Equipment Manufacturer

Miller Electric Mfg. Co.—"The Miller Electric Story" is title of profusely illustrated 48-page booklet that introduces the personnel, the plant, and the products of this manufacturer of arc and spot welding equipment. A brief historical review of the organization is featured in this 30th anniversary piece.

▲ For more details circle NED-843 A on enclosed inquiry slip ▲

OBI Presses

Niagara Machine & Tool Works—An instant engaging, low inertial friction clutch and brake is featured by Series AF open back inclinable presses covered in 24-page Bulletin 55. Presses are available in 14 sizes with shaft diameters from 1¼ to 7½ in. and capacities from 5½ to 250 tons. They can be equipped with pneumatic cushions, automatic feeds, and other special accessories.

▲ For more details circle NED-844 A on enclosed inquiry slip ▲

Mechanical Differentials

PIC Design Corp.—Pocket-size 24-page manual on "Mechanical Differentials" describes their applications to precision instrument and servo control work. Differentials are simple planetary gear systems which add or subtract angular movements transmitted to two of their components and deliver the answer to a third. They are typically used to change the phase relation of one shaft with reference to others in the system.

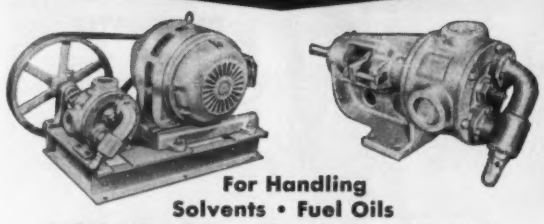
▲ For more details circle NED-845 A on enclosed inquiry slip ▲

Fastener Production Facilities

Townsend Co., Engineered Fasteners Div.—Production facilities, plants, and products of this newly organized division are reviewed in 12-page Brochure TL 151. The division makes a complete line of mechanical fasteners and special cold headed parts and is organized to help customers select fasteners best suited for specific applications.

▲ For more details circle NED-846 A on enclosed inquiry slip ▲

DEMING ROTARY PUMPS



For Handling Solvents • Fuel Oils Lubricating Oils • Chemicals • Alkalies

The Deming Rotary Pump line is NOW available in sizes ranging from ⅜" through 8" for pressures to 200# and capacities to 1050 GPM.

The Deming Industrial Pump Line also includes:

- Vertical Turbine Pumps
- Multi-Stage High Pressure Vertical Centrifugal Pumps
- "Motor-Mount" Centrifugal Pumps
- Vertical Sump Pumps
- End-suction Centrifugal Pumps

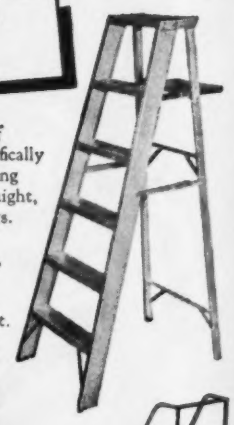
For information and specifications write:

THE DEMING COMPANY
106 Broadway • Salem, Ohio

▲ For more details circle NED-847 A on enclosed inquiry slip ▲

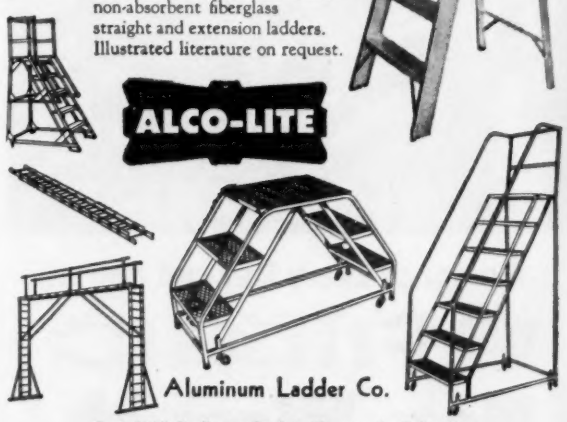
ladders for industry

• ALL-ALUMINUM
• ALL-STEEL
• FIBERGLASS



Choose from a complete line of Alco-Lite Ladders made specifically for industrial use. Easy handling aluminum step, warehouse, straight, extension, and specialty ladders. Mobile, 1 to 12 step all-steel ladder-stands. Non-conducting, non-absorbent fiberglass straight and extension ladders. Illustrated literature on request.

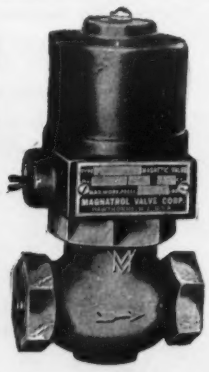
ALCO-LITE



Aluminum Ladder Co.
Dept. L8 W. Darlington St. Ext., Florence, South Carolina

▲ For more details circle NED-848 A on enclosed inquiry slip ▲

Eliminate Costly Flow Failures



Magnatrol
SOLENOID VALVES

Quick Operating *Non Sticking* *Tight Seating*

These three design advantages are your assurance against costly flow failures. Attain dependable, accurate, automatic or remote control of liquids or gases with Magnatrol Valves. Installed quickly and easily in connection with . . . flow-meters, thermostats, float and time switches. Every Magnatrol Valve is delivered to you—factory tested—guaranteed free from defects in material and workmanship.

Available in normally closed or normally open models. Pressure ranges from zero up to 300 PSI. Voltages to 575.

Catalog containing complete specifications mailed upon request.

Magnatrol

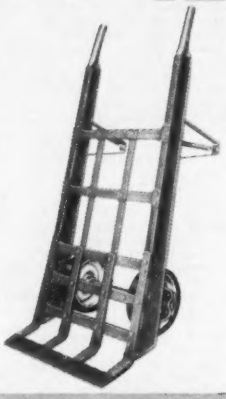
Magnatrol Valve Corp.
Fifth Avenue
Hawthorne 8, New Jersey

▲ For more details circle NED-849 A on enclosed inquiry slip ▲

AMERICAN

THE ONLY HAND TRUCK FULLY GUARANTEED FOR 5 YEARS!

More AMERICAN Hand Trucks are now in use than any other make.



This 5-year guarantee is possible because American Hand Truck durability has been proven in years of service.

Over 60 models and sizes as low as $17.75

IMMEDIATE DELIVERY and Sound Planning Help are Available Through Your Local American Distributor

MATERIALS HANDLING DIVISION
THE AMERICAN PULLEY COMPANY
4200 Wissahickon Avenue, Philadelphia 29, Pa.

For more details circle NED-850 A on enclosed inquiry slip

AMERICAN

Pressed Steel

Semi-Steel

Steelite

Semi and Full Pneumatic

INDUSTRIAL WHEELS

A complete line of Heavy-Duty industrial wheels in 4" to 12" diameters, 1½" to 4" face widths with ball or taper-roller bearings.

LOAD RATINGS TO 1700 LBS. PER WHEEL

as low as $2.75

Immediate delivery from stock by your local AMERICAN Distributor.

MATERIALS HANDLING DIVISION
THE AMERICAN PULLEY COMPANY
4200 Wissahickon Avenue, Philadelphia 29, Pa.

For more details circle NED-851 A on enclosed inquiry slip

AMERICAN

Load-Lift

SKID and PALLET TRUCKS

Separate pulling and load-raising handles assure maximum ease, safety, and maneuverability.

It's easy rolling to lower costs

as low as $315.00

See your local AMERICAN Distributor for prompt delivery and expert planning help in all phases of materials handling.

MATERIALS HANDLING DIVISION
THE AMERICAN PULLEY COMPANY
4200 Wissahickon Avenue, Philadelphia 29, Pa.

For more details circle NED-852 A on enclosed inquiry slip

New Processes & Materials

PLASTIC ADHESIVE
bonds and seals most materials

Nonconductive and unaffected by corrosive chemicals, Bond-Seal plastic adhesive is used immediately after mixing equal amounts of its two parts dispensed from two 6-oz tubes. It adheres to most metals, but has a nonmetallic base, allowing its use in electronic applications. Product makes water and oiltight repairs on iron, steel, aluminum, wood, glass, concrete, epoxy and polyester laminates, and other materials. It will not adhere to vinyl, polyethylene, or polystyrene. The 12-oz kit sells for $2. • **Crompton & Knowles Corp.**, Beetle Plastics Div., Fall River, Mass.

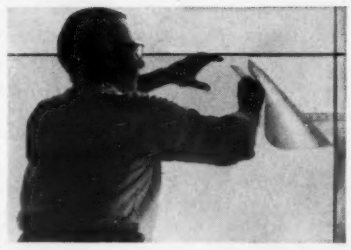
For more details circle NED-853 A on enclosed inquiry slip

CONCRETE PATCH CEMENT
also bonds to steel, ceramic tile

When troweled on any clean, structurally sound surface, Larsen-Mix concrete finishing and patching compound produces a smooth, tenacious patch. The one-component, dry-mix cement is simply mixed with water and troweled on. It will bond to steel, ceramic tile, glass, and cinder block as well as concrete, and is also suited for thin topping of concrete slabs. Tensile, compressive, and bond strengths are 1100, 4600, and 490 psi, respectively. Mix is available in 10-lb cans, 40-lb pails, and 600-lb drums. • **Larsen Products Corp.**, Drawer 5938, Bethesda 14, Md.

For more details circle NED-854 A on enclosed inquiry slip

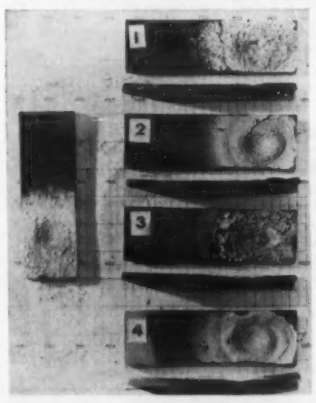
VINYL WINDOW SHEETING
reduces glare and heat



Tox - Shade special vinyl sheeting, now available for window sizes up to 48 x 72 in., effectively screens out glare and prevents excessive temperature build-up from sunlight. It is economical and easy to apply and has eye appeal. Several transparent, translucent, and opaque colors are offered. Sheeting is custom cut to exact window dimensions and is applied without adhesive. It is washable and can be stripped from the window for seasonal storage. • **Standard-Toch Chemicals, Inc.**, Toch Brothers Div., 2600 Richmond Terrace, Staten Island 3, N. Y.

For more details circle NED-855 A on enclosed inquiry slip

RESIN BONDED QUARTZ
sheet has high heat resistance



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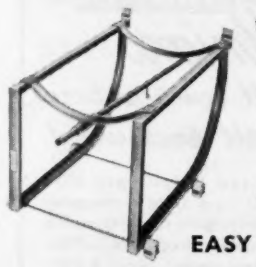

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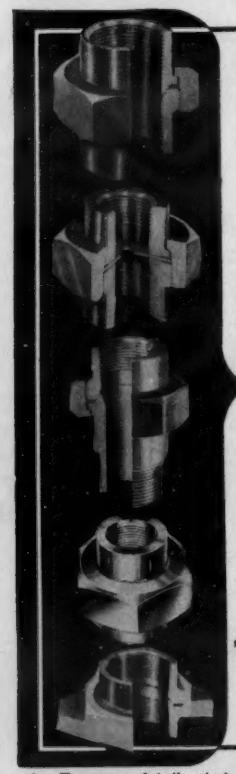

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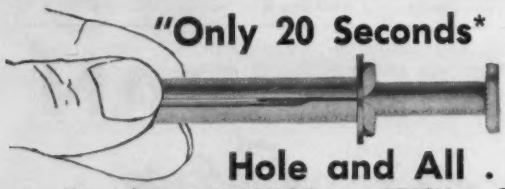

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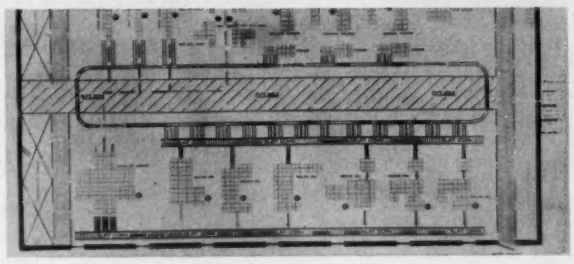

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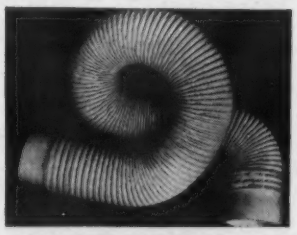
impermeable type in ½ to 12-in. ID



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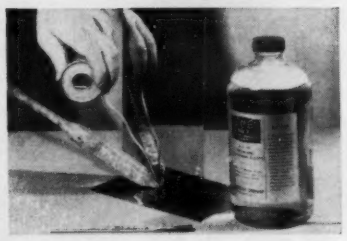

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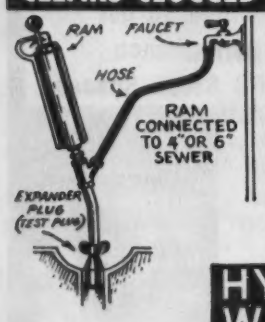

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- Meyercord Co., 5323 W. Lake St., Chicago 44, Ill.

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- Masonite Corp., 111 W. Washington St., Chicago 2, Ill.

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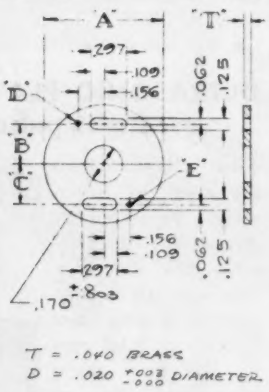

- Federal Tool & Mfg. Co., Dept. HL, 3718 Alabama Ave., Minneapolis 16, Minn.

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